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ABSTRACT

Responding to the needs of the Puerto Rico veterinary medicine community, the College of Health Related Professions of the University of Puerto Rico prepared a competency-based veterinary technology program leading to a bachelor's degree in science with a major in veterinary technology. The program is described in detail, treating such matters as the profile of the graduate, objectives, admission requirements, retention plans, degree requirements, recruitment and orientation, placement and guidance, faculty, curriculum, competencies, course descriptions, program evaluation, and resources and facilities. The budget and recommendations are included, as is a brief bibliography. (MSE)

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UNIVERSITY OF PUERTO RICO
MEDICAL SCIENCES CAMPUS
COLLEGE OF HEALTH RELATED PROFESSIONS

A PLAN TO DEVELOP AN EDUCATIONAL PROGRAM LEADING TO A BACCALAUREATE DEGREE IN VETERINARY SCIENCES

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SEPTEMBER 23, 1977

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FINAL PROJECT REPORT

PROJECT IDENTIFICATION

Contract Number	:	231-76-0087
Title	:	A Plan to Develop an Educational Program Leading to the Baccalaureate Degree in Veterinary Sciences
Contractor	:	University of Puerto Rico
Project Director	:	Jovina Marrero Félix, Ph.D.

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The project presented was developed at the University of Puerto Rico, Medical Sciences Campus, under a contract with the Health Resources Administration, HRA 231-76-0086 The Chancellor, Dr. Jorge J. Fernández Pabón and the Dean of the College of Health Related Professions, Dr. José R. González, gratefully acknowledge the opportunity given by the Health Resources Administration to develop this educational program leading to a Bachelors Degree in Veterinary Technology.

In addition, they extend sincere thanks for the contribution made to this project by the members of the Advisory Committee. (see page 9)

The Chancellor and the Dean wish to give special recognition to Dr. Alvin Price, Dr. George Poppensiek, and Dr. Nathan Watzman, Project Officer, for the valuable contribution, constructive criticism, and continuous assistance given to the Planning Group and the Project Director.

Appreciation is also expressed for the extraordinary contribution made by the Bio-Medical Faculty of the School of Medicine and the Bio-Social Faculty of the School of Public Health of the Medical Sciences Campus.

The Chancellor and the Dean express their sincere thanks to the Planning Group and the Staff of the project for their constant contribution and valuable input for the fulfillment of the objective proposed, a plan for an educational program in veterinary technology.

The Dean and the Chancellor are also grateful of the contribution to this project made by the Office of Curriculum Affairs of the College of Health Related Professions.

I. INTRODUCTION

The main objective of the Project has been to produce an educational program leading to a Baccalaureate Degree in Veterinary medical field such as large animal practice, small animal hospitals, laboratory animal care, regulatory public health and inspection in poultry and livestock, etc. This need is more acute because all veterinarians have to go abroad for their professional training since the island does not have a school of veterinary medicine. As a consequence, the number of trained veterinarians (85 at present) is small and points to the need for a large group of trained veterinary technologists.

Veterinary medicine is one of the professional fields in which technical assistants are lacking. As the animal health care delivery becomes more complex, more technical assistance will be needed to compel veterinarians to perform highly technical tasks such as: diagnosis, prescription of treatment, surgical procedures, and prognosis.

Professional veterinarians have become increasingly aware of the need for veterinary science technologists to support and complement the work of investigators in such areas as milk, meat and poultry inspection, regulatory functions, and private veterinary practice. The rapid development of this occupational field is providing new technicians with meaningful and rewarding opportunities.

Veterinarians in Puerto Rico have shown interest in being provided with the services of trained personnel capable of sharing with them many of their less professional duties. Most verterinarians in public agencies or in private practice use aides or attendants, but according to their recent reports, these are, as a whole, unskilled youths whom they hire and train later on the job. These assistants perform the more menial, routine tasks which their limited training allows, but do not give the types of services that a well-trained technologist could provide and which veterinarians badly need in their professional work.

Veterinarians have reported that there is and shall continue to be a sizeable demand for animal technicians for regulatory and food inspection services and for livestock and food inspections. 1/ This has been evidenced also by a survey carried out in Puerto Rico 2/ and by other data related to veterinary services.

Veterinary Science Technologists, under the direct supervision of veterinarians, will be of great help to improve and maintain the health of animals and will play an important role in human health care by safeguarding animal food supply and food-producing animals to insure the consumer of the best product and by controlling animal diseases that affect humans.

Responding to the above mentioned need, the College of Health Related Professions, University of Puerto Rico, Medical Sciences Campus, prepared a Competency-Based Veterinary Technology Program leading to a Baccalaureate Degree in Sciences with a major in Veterinary Technology. It is a competency based educational program which prepares students for the job market. Thus, it is intended that this person must have those specific competencies needed to perform as a Veterinary Technologist. Furthermore, the proposed program will provide the future practitioner with theory, general background knowledge, and specific competencies in the field of veterinary sciences. It is also expected that through coordination with other programs and with public health service agencies, the future technologist will make a sound contribution to disease prevention, and to general aspects of the Puerto Rican economy as well.

II. RATIONALE

Our modern society is characterized by its rapid growth and the drastic changes it is undergoing every day. Science and technology are being developed to cope with the needs and problems that growth and change bring about. In the field of public health, both preventive and treatment programs are being carried out in order to provide comprehensive services to the population.

Animal technology, as a new area of specialization, is growing in Puerto Rico. Veterinary professional groups have come aware of the need to increase research to cope with the local problems for animal health care. To release time for this activity, well trained technologists are needed to whom the veterinarian could delegate different tasks. These well trained technologists are not only needed by government agencies but by pharmaceutical companies, zoological parks, race tracks, research laboratories, medical schools, and veterinary hospitals as well. Services rendered to satisfy those needs will bring about the conservation of the public health which is the ultimate goal of the program.

The need to prepare this new professional is especially acute in Puerto Rico because of the extent of animal diseases, the need to advise farmers and the lack of a professional school to train veterinarians. There are only 85 veterinarians on the island, the majority of whom practice in the San Juan Metropolitan Area. Given a pool of veterinary technologists would find employment in agriculture, as it is public policy of the Puerto Rican government, to reemphasize agriculture as a scientific and an economic enterprise.

Based on data available, the future needs of the Veterinary Technologist fully justify the program. There is a demand of 80 Veterinary Technologists during the next five years. For sure this number will increase considering the fact that at present there are 85 Veterinary Medical Doctors and in the next 5 years, the need will be 108. As expressed in our interview by the President of the Puerto Rico Farmers Association, a Veterinary Medical Doctor needs at least one Veterinary Technologist.

III. TERMINOLOGY

1. Competencies - identified and assessable behavior (or behavioral indicators) reflective of requisite professional knowledge, performance skills, therapeutic applications and attitudes. 1/

2. Competency-Based Curriculum - is purposefully provided for ensuring that learners possess pre-determined professional attributes. 2/

3. Veterinary Technologist - is that person who possesses specific competencies to function safely with small and large animals in any setting of practice under the supervision of a veterinarian.

4. Bio-Social Core - is defined as that fundamental knowledge of social aspects of public health, community health, health problems, and health administration which is common to all students of the College of Health Related Professions.

5. Bio-Medical Core - is defined as that fundamental knowledge of the basic Bio-Medical Sciences common to all students of the College of Health Related Professions.

6. Terminal Objective - is defined as that objective which states what the student will do in terms of a continium of experience during the study of a certain topic or concept. 3/

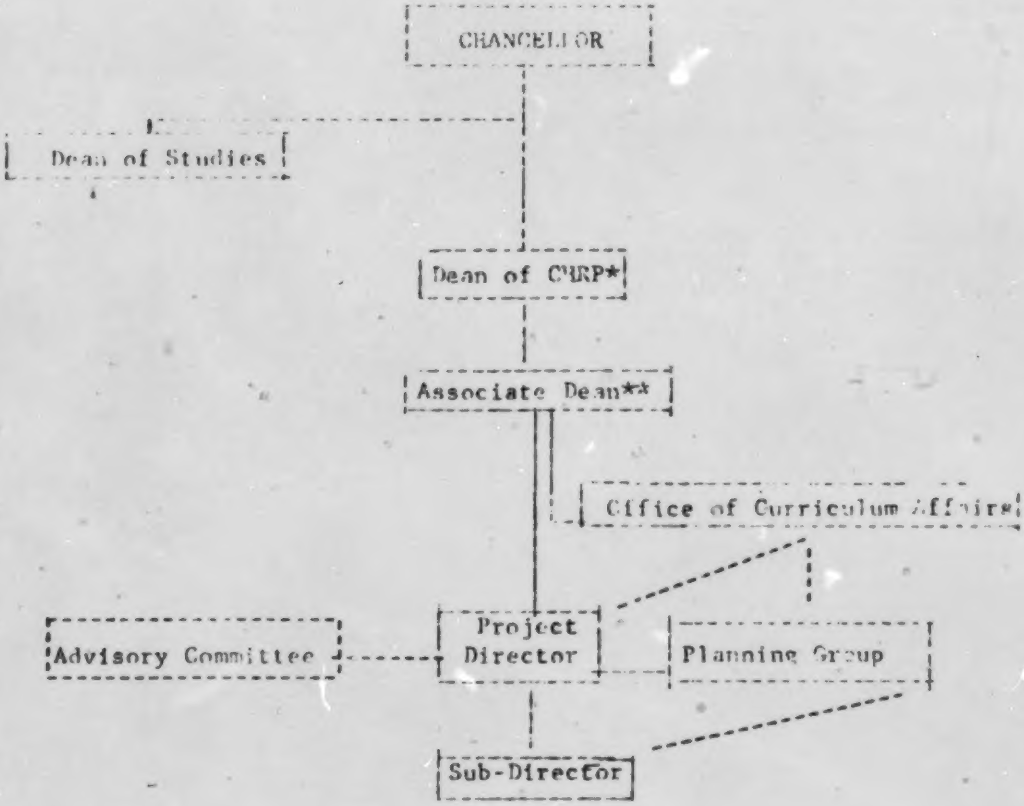
7. Enabling Objective - is defined as the more precisely stated objective to treat the topic or concept stated in the terminal objective. Each of these objectives represents a single activity or learning step. 4/
8. Formative Evaluation - refers to assessments of worth focused on instructional programs that are still capable of being modified. 5/
9. Summative Evaluation - refers to assessments of merits focused on completed instructional programs. 6/

IV. METHODOLOGY

A series of activities were developed to achieve the main objective of the Project which was to produce a plan for an educational program leading to a Baccalaureate Degree in Veterinary Technology. These activities were accomplished according to a Task Work Schedule. The Task Work Schedule was comprised of 22 objectives and the specific activities to be accomplished during the project year contract period (see appendix 1, Task Work Schedule).

The Dean of the College of Health Related Professions appointed the members of the staff of the Project. The staff

ADMINISTRATIVE STRUCTURE OF THE PROJECT TO DEVELOP AN EDUCATIONAL PROGRAM LEADING TO THE BACCALAUREATE DEGREE IN VETERINARY SCIENCES TECHNOLOGY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Dean of Studies
Dean of CHRP*
Associate Dean**
Office of Curriculum Affairs
Advisory Committee
Project Director
Planning Group
Sub-Director

** Project Coordinator

* College of Health Related Professions

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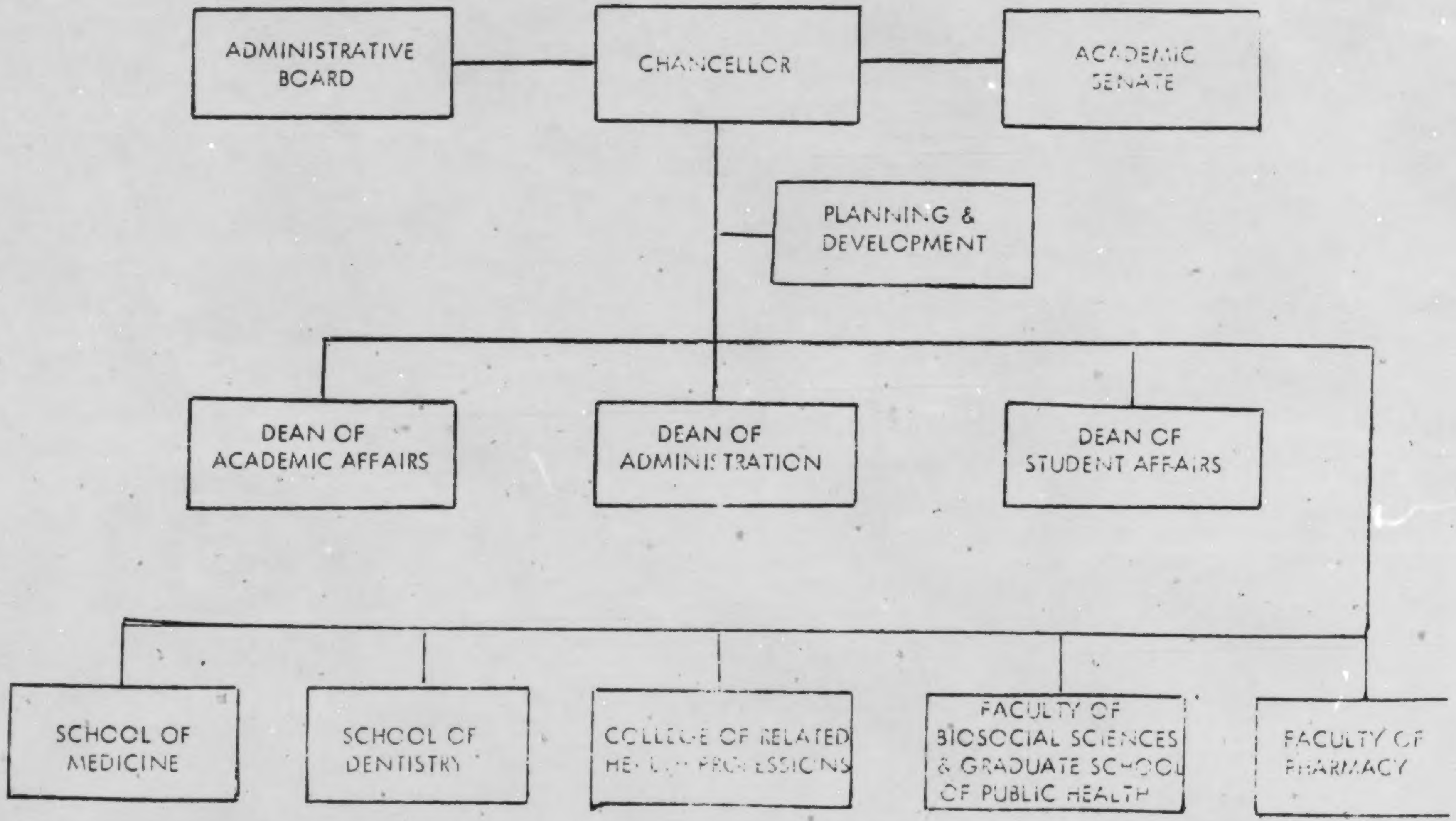
MEDICAL SCIENCES CAMPUS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CHANCELLOR

ACADEMIC SENATE

PLANNING & DEVELOPMENT

DEAN OF ACADEMIC AFFAIRS

DEAN OF ADMINISTRATION

DEAN OF STUDENT AFFAIRS

SCHOOL OF MEDICINE

SCHOOL OF DENTISTRY

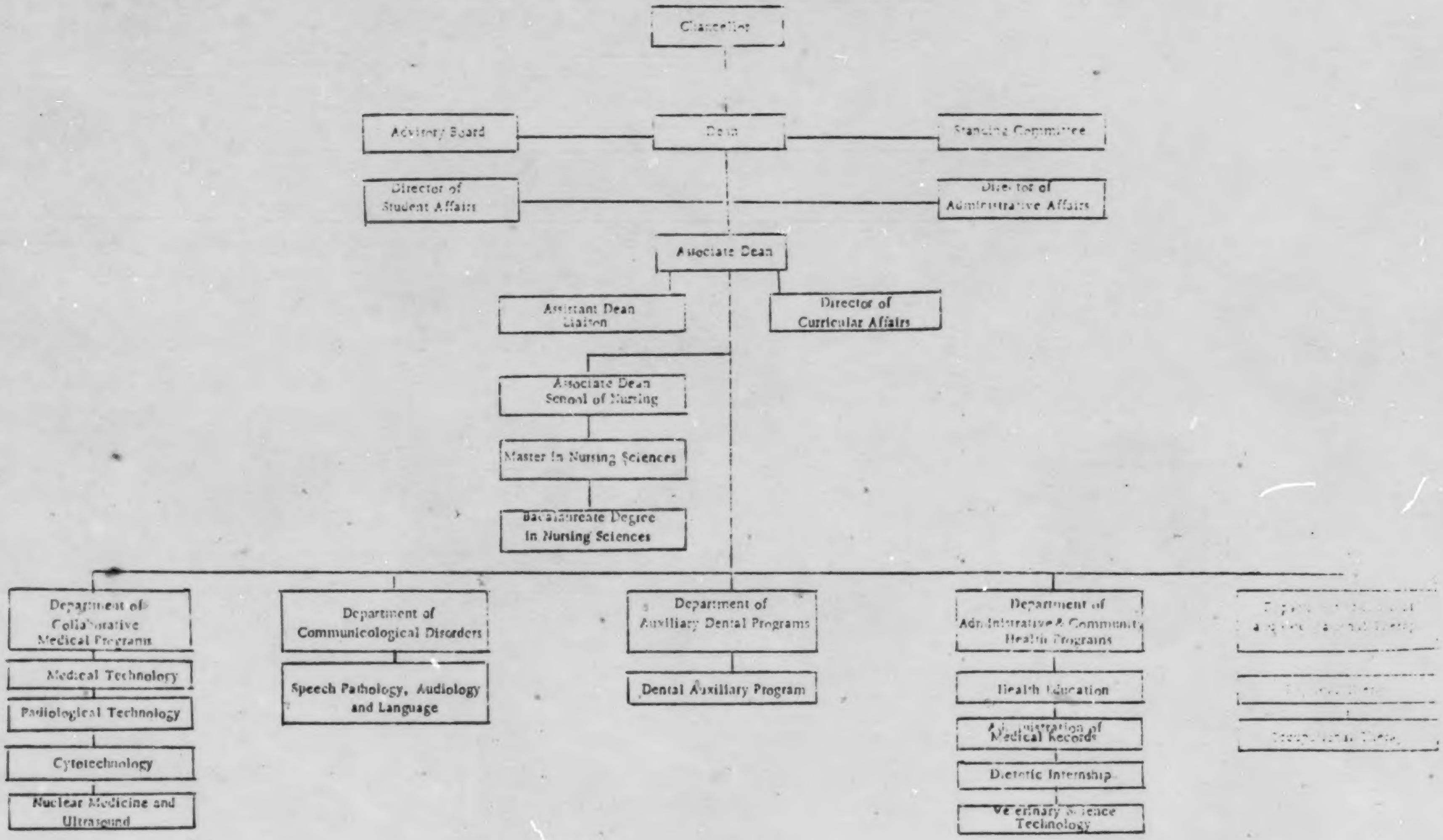
COLLEGE OF RELATED HEALTH PROFESSIONS

FACULTY OF BIOSOCIAL SCIENCES & GRADUATE SCHOOL OF PUBLIC HEALTH

FACULTY OF PHARMACY

MEDICAL [illegible]

COLLEGE OF HEALTH RELATED PROFESSIONS


Chancellor
Advisory Board
Dean
Standing Committee
Director of Student Affairs
Director of Administrative Affairs
Associate Dean
Assistant Dean Liaison
Director of Curricular Affairs
Associate Dean School of Nursing
Master in Nursing Sciences
Baccalaureate Degree in Nursing Sciences
Department of Collaborative Medical Programs
Medical Technology
Radiological Technology
Cytotechnology
Nuclear Medicine and Ultrasound
Department of Communicological Disorders
Speech Pathology, Audiology and Language
Department of Auxiliary Dental Programs
Dental Auxiliary Program
Department of Administrative & Community Health Programs
Health Education
Administration of Medical Records
Dietetic Internship
Veterinary Science Technology
Occupational Therapy

and the Dean of the College organized an internal Planning Group and an external Advisory Committee. The Planning Group developed the Task Work Schedule through which the planned activities were carried out.

The administrative structure of the Project as well as the formulation of the function for the Staff, the Planning Group and the Advisory Committee, were then established.

Staff Members

Project Director : Dr. Jovina Marrero Félix, Ph.D.
Project Sub-Director : Dr. José Rivera Anaya, D.V.M.
Project Coordinator : Alma Cajigas, M.D., Associate Dean
Secretary : Ms. María T. García

Planning Group

Jovina Marrero, Ph.D. : Project Director
José Rivera Anaya, D.V.M.: Project Sub-Director
Alma Cajigas, M.D. : Project Coordinator
Walter Colón, D.V.M. : Veterinarian
Angel L. Ortiz, Ed.D : Curriculum Specialist
Ramón Claudio, E.D. : Curriculum Specialist
José M. Colón, Ed.D : Evaluation Specialist
Mrs. Carmen Rossy : Director, Department of
: Administrative Programs
: and Community Health
Luis R. Díaz, Ed.D.* : Curriculum Specialist

Staff Members

Project Director	Dr. Jovina Marrero Félix, Ph.D.
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Secretary	Ms. María T. García

Planning Group

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Alma Cajigas, M.D.	Project Coordinator
Walter Colón, D.V.M.	Veterinarian
Angel L. Ortiz, Ed.D	Curriculum Specialist
Ramón Claudio, E.D.	Curriculum Specialist
José M. Colón, Ed.D	Evaluation Specialist
Mrs. Carmen Rossy	Director, Department of Administrative Programs and Community Health
Luis R. Díaz, Ed.D.*	Curriculum Specialist

Advisory Committe Members	Field Represented
Alvin Price, D.V.M. College of Veterinary Medicine - Texas A. & M. University	Veterinary Medicine Educator
George Poppensiek, D.V.M. New York State University (Veterinary College)	Veterinary Medicine Educator

Luis A. López, M.D. : Public Health Physician

Juan A. Silva, Ph.D. : Environmental Health

Arturo Morales, M.D. : Epidemiology

Carlos Miranda : Veterinarian, United States Department of Agriculture

Eduardo Toro, D.V.M. : Veterinarian, private practice

Dr. Juan Armstrong : Veterinarian, U.S. or Puerto Rico, Department of Public Health

Dr. Benjamín Domínguez : Veterinarian, U.S. or Puerto Rico, Department of Agriculture

Functions of the Planning Group

The Planning Group was composed of eight members; two curriculum specialists, one evaluation specialist, two experts in Veterinary Sciences, the Project Director, the Director of the Department of Administrative and Community Health Programs. The Group exercised the following functions:

1. Developed a work schedule for project activities, including objectives, activities, resources to be used, methodology, and target deates for all of the above.
2. Carried out weekly meetings to review work underway by consultants.

3. Assisted the Project Director in scheduling and participating in meetings with the Advisory Committee.
4. Assisted the Project Director in the planning phases including the curriculum and the evaluation aspects.
5. Assisted the Project director in writing the progress and the final reports.

Functions of the Advisory Committee

The Advisory Committee was composed of eight members: two representatives in Veterinary Medicine from the United States, a consumer, an environmental health specialist, public health physician and veterinarians in public and private practice. It exercised the following functions:

1. Provided professional advice to the Project Director and the Planning Group.
2. Assisted the Project Director and the Planning Group in making recommendations and comments on those areas of the program in Veterinary Science Technology.
3. Evaluated and endorsed the final report and the educational program in Veterinary Science Technology.

The collaboration of the Advisory Committee through the entire process of the project planning was of tremendous assistance to the Project Director and the Planning Groups.

During the project year activities, the two consultants and members of the Advisory Committee from the mainland, Dr. Alvin Price and Dr. George Poppensiek, kept themselves in constant interaction with the Project Director and the Planning Group.

Professional advice and assistance was given by Dr. Nathan Watzman, Project Officer to the Project Director and the Planning Group during his visits to the island and through his feedback of the progress reports. Dr. Nathan Watzman's advisement during the first meeting of the Planning Group and the Advisory Committee on November 1976, and during the last Curriculum Workshop on July 1977 were extremely valuable to the Project Director and the Planning Group.

In order to assure and facilitate feedback from the Advisory Committee, the Planning Group organized two Curriculum Workshops. This method was found to be the most feasible way to obtain direct feedback from members of that committee. Their contribution helped to clarify ideas relevant to the development of the educational program in veterinary technology. In particular, the contribution of Dr. George Poppensiek and Dr. Alvin Price, with the thinking and modification of ideas related to the educational program in total, and particularly in curriculum process, was of great value.

These two workshops were held in the island during the month of March and July 1977 with members of the Advisory Committee, Planning Group, members of the Bio-Medical and Bio-Social faculty of the Medical Sciences Campus, and Dr. Nathan Watzman, Project Officer.

Another activity carried out by the Planning Group at the early stages of the project, was the evaluation and assessment of similar curricula from the United States:

Bio-Medical Sciences Program
College of Veterinary Medicine
Texas A & M University
College Station, Texas

Department of Animal Sciences
Institute of Food and Agricultural Sciences
University of Florida

California State Polytechnic College
San Luis Obispo, California

Purdue University
Lafayette, Indiana

Washington Technical Institute
Washington, D. C.

Quinipiec College
Hamden, Connecticut

Michigan State
East Lansing, Michigan

Functions of the Project Director

The main function of the Project Director was to exercise leadership for the development of a "Plan to Develop an Educational Program in Veterinary Science Technology." In order to fulfill the above mentioned responsibility, the Project Director carried out the following functions:

1. Directed and coordinated all activities towards the accomplishment of the proposed program.
2. Developed a task work schedule with the planning group to accomplish activities proposed.
3. Prepared and submitted regular information and progress reports concerning the project development to the Dean of the College of Health Related Professions and Coordinator of the Project.
4. Kept track of all project expenses and submitted recommendations for budget revisions, whenever necessary.

5. Coordinated those activities pertaining to the development of the project with the office of Curriculum Affairs.
6. With the assistance of the Planning Group, wrote the progress and final reports of the project.

Functions of the Sub-Director

1. Served as official representative of the Project Director in all assigned activities during emergency situations and or during her absence.
2. Participated in all project-related activities and carried out on behalf of the Project Director those specific tasks or functions delegated to him.
3. Collaborated with the Project Director in preparation and submittal of progress and other types of reports.
4. Collaborated with the Project Director in developing an overall task schedule of project activities.
5. Assisted the Project Director in developing a calendar of meetings of the Planning Group and the Advisory Committee and other personnel necessary.

REASSESSMENT OF NEEDS

As a framework for curriculum development, information of present and future needs of the veterinary technologist ot private and public agencies was necessary. The Planning Group analyzed the available literature and made current the data related to the assessment of needs of veterinary technologist in Puerto Rico. (see Appendix 2, study of Dr. Amalia Llabrés de Charneco) A questionaire was then developed and distributed to eight private and public agencies requesting data on their future needs for a veterinary technologist (see Appendix 3, Questionnnaire). Four questionnaires were returned from these eight agencies. A follow-up of the four agencies which did not answer included a questionnaire and contact by telephone.

The four respondents were the Puerto Rico Farmers Association, the Agricultural Extension Service, Agricultural Experimental Station, and the Puerto Rico Veterinary Medical Association. The data revealed that there definitely is a need for qualified personnel in the field of veterinary services. Representatives of these agencies suggested competencies which could be considered in the preparation of the veterinary technologist. Among these competencies are: animal restraining, first aid, quarantine (including rules and regulations), sterilization and aseptic conditions, administration of medicine, laboratory technics, medical records, administration (general management), insemination, preventive medicine-orientation, assistant to surgeon, sterilization of equipment, bacteriology and nutrition.

However, the questionnaire respondents and interviewees reiterated their concern for the establishment of legal bases for the veterinary technology profession in Puerto Rico. During the month of March 1977, Dr. Jorge J. Fernández Pabón, Chancellor of the Medical Sciences Campus, University of Puerto Rico, participated in one of the public hearings held by the joint Commissions of Agriculture, Natural Resources, Welfare, Environmental Quality and Treasury in the Puerto Rican Legislature. At that time, he endorsed the bill, P.S. 55. (See Appendix 4 for text)

V. THE EDUCATIONAL PROGRAM

A. Conceptualization

The proposed program will be designed to train capable young men and women to work primarily under the supervision of graduate veterinarians. The graduate will enter the field at a level lower than that of a doctor in veterinary medicine, but above that of an animal attendant. It should be understood that although the veterinary technologist will not perform diagnosis or surgery, nor write prescriptions or make prognosis, he/she will be prepared to perform important tasks adequately under the guidance of a doctor in veterinary medicine.

The curriculum for the veterinary science technology degree will be designed to disseminate knowledge in areas such as operating room technique, medication, feeding and monitoring, porper sanitation, assisting in prevention and treatment of diseased, performing laboratory tests, and reception and record keeping, among others. The curriculum will also include coursed to develop competencies in the administration of the animal clinic, and operation of a farm. Techniques for effective communication and public relations will be taught. The relation of animal health and environment to human health will be covered also.

The objective of the Veterinary Technology Program is to prepare men and women for comprehensive career employment in the veterinary science field. It is expected that the program will assist in meeting the growing demand for competent technical support personnel in the biomedical and biosocial research fields and the veterinary profession. It is expected, by the same token, that the graduates of this program will contribute to the growth of the Puerto Rican economy and improvement of public health. Veterinary technologists could provide needed specialized preventive services in the field of public health. They could work for the Departments of Health and Agriculture in programs that have an impact on food processing, large animal health, milk inspection, and the like. It is intended that, through veterinary sciences, an aspect of preventive health for the human population will receive attention. The well-trained veterinary technologists will free the veterinarians to perform more specialized tasks; that is, the veterinarians will be able to bring his/her expertise to wider areas of concern through the minds and hands of one or more technologists. A multiplier effect should result in the Puerto Rican veterinary community.

B. Philosophy

The College of Health Related Professions will administer this program as part of the Medical Sciences Campus, sharing with the University the goals and ideals of excellence in terms of services to the Puerto Rican community. These services respond to the needs of our present society. Future needs as visualized due to changes that our society is undergoing will also be considered. In the implementation of this responsibility, the College of Health Related Professions will keep in close coordination with other agencies which render public health services, the Department of Health in particular. The College functions within the framework of the philosophy of the University of Puerto Rico, as it is expressed in the objectives of the University of Puerto Rico and clearly stated in the University Law of 1966.

According to this educational philosophy, the College is committed to offer high quality of education so as to prepare professional practitioners in several fields related to public health. Its practice should evidence a democratic educational philosophy which attempts to fulfill our educational needs without reservation of age, sex, race, religion, or political ideas.

Furthermore, students from different socio-economic levels and geographic areas will be encouraged to participate in the program. The College is aware of the fact that establishing a program is only the beginning of an on-going process. The excellence of the health services will be accomplished by constant improvement of the practitioners through a continuing education program.

It is believed that a climate which fosters motivation and enhances intellectual skills and free communication will make the teaching and learning process more fruitful and supportive toward the development of learners. Opportunities will be provided to the students to act independently, demonstrate their strengths and acknowledge their shortcomings with the objective support of the faculty. There is agreement among educators that knowledge acquired thorugh the student's active participation in the discovery process is more permanent. Thus, independent study and field experiences will be part of the program.

Because the College believes that high quality health related services hould be rendered to the community, it strongly supports the creation of programs with that aim. Consequently, a sense of professionalism and the aspiration to excel will be instilled also in the students of this program. The program will be flexible and may be modified periodically to better fulfill its goal.

C. Profile of the Graduate

The need of a well qualified technologist in veterinary sciences has been clearly stated. The graduate will primarily be an assistant to veterinarians, biological research workers and other scientists. He/she will be knowledgeable in the care and handling of animals, the basic principles of normal and abnormal life processes, laboratory and clinical procedures, and, in general, public health practices.

The candidate for the training program should be an inquisitive, critical, professional mature person, who, having acquired the necessary knowledge and skills, will be able to make judgements and take action after consultation with the veterinarian in charge. In the program, he/she will develop enough self-assurance to use specific competencies to contribute to the improvement of public health.

The graduate will be able to help in solving veterinary problems utilizing research findings, his experiences and his knowledge. He/she will be constanly learning through practice, formal studies, seminars, workshops, and the like. He/she will adhere to professional ethics and limit his/her actions within the framework of the norms and code already accepted by the Veterinary Medicine Association.

Veterinary Technology is a body of technical knowledge and skills needed to prevent and treat animal disease. It also concerns veterinary sicence in general and the various branches of specializations in veterinary medicine, except funcitions or activities such as diagnosis, prescription, surgery, prognosis, and similar expertise which requires more advanced training than what is available in a baccalaureate program.

D. Goals and Objectives

Goals

1. To contribute to the improvement of the economy and the public health of Puerto Rico through increased access to veterinary medical services.
2. To provide added educational opportunities for students to enter the health professions.

3. To provide a basic academic program which will enable a student to select alternatives among programatic areas of health related professions.
4. To upgrade the veterinary science profession in Puerto Rico.

Objectives

Through the experiences provided by the program, the student will:

1. Demonstrate competencies to perform adequately in public health prevention activities, care and maintenance of domestic animals such as technical skills in X-Ray, anesthesia, public health, administration, surgical nursing, animal food, and food inspection, which will distinguish him/her from other professional.
2. Become aware of the imporance of effective communication as a means to improve the affective domain and its application to public relations.
3. Develop positive attitudes toward his/her ongoing growth within the profession.

4. Develop a sense of respect, commitment, and appreciation toward the profession.
5. Evidence a positive attitute toward public service.

E. Functions of the Veterinary Technologist

At the end of the educational program the Veterinary Technologist will be ready to:

1. Perform as a technical assistant to the veterinarian in a variety of clinical settings such as small and large animal practices.
2. Collaborate with the veterinarian and others in the design and implementation of research projects and to carry out simple research projects as deemed necessary for the effective execution of his/her functions.
3. Perform as a regulatory officer in the promotion of animal health and in enforcing laws and regulations concerning the preservation and distribution of animal products.
4. Participate in the promotion of human health providing guidance and orientation to the public in relation to animal and environmental health.

F. Admission Requirements

In order to select students for the program with high likelyhood of fulfilling above objectives, and upon graduation, meeting program goals, the following admission requirements were basic:

1. High School graduation or equivalent, including:

    Chemistry - 2 semesters
    Physics - 2 semesters
    Biology - 2 semesters
    Algebra - 2 semesters

2. High School Cumulative Index: 2.00.
3. Handwritten autobiographical summary to be submitted with the application form.
4. Evidence of good physical and mental health.
5. Personal interview with faculty admission comiittee and other representatives of professional groups.
6. Passing scores of CEEB (Aptitude and Achievement Tests) as.
7. Two (2) letters of recommendation from persons related to the Veterinary Medical Field.

8. Two (2) recent photos.

G. Retention of Students

Year	Grade Index	Credit Approved
First	1.6	31 academic credits
Second	1.7	64 academic credits
Third	1.8	100 academic credits
Fourth	1.9	130 academic credits

Concentration courses must be approved with not less than C. Negative deviation from this standard should be satisfied by repetition of the course.

H. Interphase

Before entering the third year of professional studies the student will experience an interphase screening process in which he/she will demonstrate interest and identification with the Veterinary Technology Profession as accepted by the Retention Committee. This interphase has the following objective: To assess at the end of the second year of studies, if the candidate to a Bachelors Degree in Veterinary Technology demostrates the knowledge and competencies expected at that level of performance. In addition, it is expected that the student will show vocation and desirable attitudes for the type of work needed to perform as a veterinary technologists.

Procedure

An academic advisor will be assigned at the beginning of the program to the student. The student will discuss with his advisor any academic problem or difficulty encountered while carrying out his/her program. In this way the academic advisor will keep abreast of the student's progress.

At the end of the second year of studies an Evaluation Committe will evaluated the student's achievement at that level. This Evaluation Committee will be composed of all the students advisors. Academic achievement, as well as attitudes, will be evaluated at the end of the second year.

The results of the evaluation will give direction to the following alternatives, according to his/her standings:

a. Be certified as a cadidate for a Bachelors Degree in Veterinary Technology. Therefore, he/she is allowed to go ahead with the program.

b. Have the necessary orientation and advise so as to help him/her update his/her deficiencies.

c. Be oriented to the field toward he/she shows vocation, abilities and attitudes.

A final comprehensive evaluation will be given at the end of the fourth academic year and upon completing all the requirements. This comprehensive evaluation will include:

b. an oral comprehensive exam

For the oral comprehensive examination the student presents a written paper (essay type). In this written paper and through his/her verbal interaction with the Evaluation Committee he/she will demonstrate his intellectual capacities and knowledge.

His/her certification for the candidacy to the Bachelors Degree depends upon a satisfactory evaluation.

I. Graduation Requirements

In order to qualify as a candidate for a degree, a student must satisfy the following requirements:

1. Have passed with a minimum academic index of 2.00 courses required by the Veterinary Technologist Program. Students with an index of 3.00 to 3.32 inclusive will be graduated with honors (CUM LAUDE) and those with an index of 3.33 or more will receive the degree with high honors (MAGNA CUM LAUDE).
2. Complete the studies towards the degree within the maximum time limit of 10 years.

If the student should exceed the established time limit, the University may require him/her to repeat the courses which according to the corresponding Dean require a review. In those cases the student must obtain from the Dean a written authorization in duplicate, with the list of courses which are to be repeated. This authorization must be confirmed by the Registrar.

3. Satisfy his financial obligations with the University.

4. Officially apply for the degree, during the beginning of the semester in which she/he is to complete his/her academic requirements. If possible, the application should be presented on registration day. During the Summer Session, the application must be presented on registration day.

    a. Must have been recommended for the degree by the corresponding faculty and the Administrative Board.

    b. Attend commencement exercises unless he/she has been excused by the Dean of the corresponding College or School.

The University holds commencement exercises once a year at the end of the second academic semester. All degree, diplomas and certificates are granted on that occasion only. The candidate who has satisfied course requirements at the end of the summer or first semester may apply for a certificate of completion of the prescribed studies.

J. RECRUITMENT AND ORIENTATION

General Guidelines for Recruitment and Orientation Program of the Medical Sciences Campus

Goal: Design and implement a recruitment program to identify potencial candidates for the Veterinary Technology Program.

General Objective: Plan and implement orientation and recruitment activities to attract qualified high school students to the Veterinary Technology Program.

Plan:

1. Make a list of all Puerto Rican high schools.
2. Identify and meet the counseling personnel of all high schools (divided according to the six educational regions: Caguas, Arecibo, Humacao, Mayaguez, Ponce, and San Juan) to discuss the objectives of the project, and obtain their cooperation and recommendations.
3. Assist high school counselors and teachers in the identification of interested students who meet the admission criteria of the Veterinary Technology Program.

4. Hold meetings with groups of prospective students and prepare with them a schedule of activities for their vocational orientation. This schedule could include:
   a. Talks about: profile of the Veterinary Technologist, description of the educational program, admission requirements, characteristics of the curriculum, financial aid and other pertinent information.
   b. Work as volunteers with veterinarians to get a realistic picture of the nature of each profession.
   c. Organization of Clubs.
   d. Visits places related with veterinary practice.
   e. Visit the Medical Sciences Campus.
   f. Peer orientation-each club organized could be assigned to a peer orientator for counseling purposes.

The Orientation Office of the College of Health Related Professions plan, coordinates and participates in the implementation of the recruitment and orientation program at campus level. In coordination with the Office of Orientation and Recruitment at campus level carried out activities during the academic year and specially during the time of the year designated for the purpose of recruitment and orientation.

K. PLACEMENT AND GUIDANCE

A plan for student guidance and placement in desirable, convenient and attractive employment upon graduation is an important part of the educational program.

General Guidelines for Student Guidance and Placement Services for a Qualified Veterinary Technologist

Objective:

To develop a plan for student guidance and placement for qualified veterinary technologists.

Plan:

1. Keep up to date potential employment agencies for a veterinary technologist. Send a brochure of the program with a cover letter.
2. Identify and meet with key potential employment agencies to discuss the total educational program emphasizing the objectives, functions and competencies of veterinary technologist.
3. Coordinate with the different employment agencies regular meetings with students so as to keep informed about the opportunities, requirements, salaries, name and location of agencies, norms, policies and procedures.
4. Coordinate with employment agencies the placement of students in summer emplyment

between the second and third year of studies. This employment opportunity should be well planned so as to fit with the occupational objective of the student to allow him/her have a real work experience before graduation.

5. Coordinate a yearly meeting with representatives of different agencies, employers, employees (veterinary technologist) to make an appraisal of the product and the current and continuing needs of a veterinary technologist.
6. Keep channels of communication open with office of personnel and labor Department of the Commonwealth of Puerto Rico so as to keep up to date on job description and job classification of a veterinary technologist.

L. FACULTY

1. Procedures for Establishing Faculty-Student Ratio

A. Determine initial registration and its annual increase based on application submitted.

B. Determine the College of Health Related Professions facilities including clinical sites.

C. Study the Veterinary Medical Association standards and practice in colleges with innovative veterinary programs.

D. Consider teaching strategies to be used.

E. Determine human resources available in the College of Health Related Professions and those to be contracted to implement.

2. Procedures for Faculty Recruitment

A. Study the University Law and Personnel Regulations.

B. Establish responsibilities and functions.

C. Create a Faculty Recruitment Committee.

D. Study possible sources which might provide faculty members (Veterinary Medical Association).

E. Establish guidelines for faculty selection.

F. Determine, through negotiations within the Medical Sciences Campus, the expertise already on board.

3. Functions and Responsibilities of the Faculty

A. Teach those courses assigned by the department director as the respective appointment indicates.

B. Supervise and avaluate student performance and those program areas related to the courses under his/her responsibility.

C. Participate in research activities which contribute to the growth of veterinary technologist and other fields.

D. Attend faculty meetings and participate in the discussion of all matters related to the educational progra,

E. Promote and participate in community activities.

F. Attend and participate as member of committees of the Department and of the College of Health Related Professions.

G. Give academic guidance to students and direct students in relation to special problems.

The selection of the staff members of the proposed program was then considered. It was decided that the director should be an experienced practitioner, a person knowledgeable in the field of veterinary medicine and able to establish a communication with those agencies which employ veterinarians and veterinary technologists. Such a person should be a Doctor of Veterinary Medicine. He/she is in a better position to orient and guide academic affairs of faculty and students and able to manage issues and problems of the field of veterinary science.

The other qualified personnel considered are those concerned for the teaching of veterinary sciences. These are instructors to be selected. Instructors who teach in this area of veterinary sciences must be full-time professional teachers. As the director of the program they must be Doctors of Veterinary Medicine. They must be proficient in their practice and skills and interested in teaching in a baccalaureate program for the preparation of a veterinary technologist.

Besides the full-time instructors there will be to teach at the clinical field area of practice, the bio-medical, bio-social an public health content. This personnel may be of two types: those who teach ad-honorem and become instructors of the College of Health Related Professions and those who are paid under contractual bases. The College has considered both types of instructors. In selecting this faculty, the full-time instructors, the director of the program, the dean, and the administrator should proceed under the basis of a sound criteria.

The program here suggested could be initiated with two full-time faculty members in addition to the department head. They have been estimated for the accomodation of a beginning class of twenty students. An increase of five (5) students after the first year is expected. The University Law of 1966 states a classroom proportion of student to one teacher of no more than thirty students and no less than ten.

Continuing education is very important in keeping the staff up to date on innovative changes in the instructional process. The College of Health Related Professions through the Office of Curriculum Affairs and the Continuing Education Program maintains its faculty up to date.

M. CURRICULUM

The curriculum designed in Veterinary Technology was based upon certain basic requirements. These basic requirements were identified as:

1. A General Content Area of Curriculum

As part of the curriculum design was the identification of the general content areas of the curriculum. These were identified as Bio-medical and Bio-social Core, Professional or Concentration Core, General Education and Elective Core.

A. The Bio-Medical Cores includes all the fundamental knowledge of the basic sciences which is necessary that all health workers and graduates of the College of Health Related Professions must obtain.

B. The Bio-Social Core includes the fundamental knowledge in public health and biosocial sciences related to man and his environment, community health, health problems and health administration. This framework provides the ecologial point of view within the process of health-illness continuum occurs.

C. The Professional Core includes the knowledge of veterinary sciences, and the professional skills needed for the veterinary technologist to function as such, and knowledge of biomedical and biosocial sciences in depth and breadth related to the professional content of the curriculum.

D. The General Education Core includes a general background knowledge which is required by the university for all baccalaureate graduates.

E. Elective Core included that knowledge in the curriculum which is selected by the student and which provides for his/her personal growth.

2. Competencies

The competencies described below be used by the veterinary technologist in the performance of his functions (as stated on pages 21 and 22). These competencies very well describe the job activities expected to be executed in the job by the veterinary technologist.

Broad areas of competencies as well as specific competencies were identified:

AREA	COMPETENCIES
Community Health	Describe the public health science in terms of its organization, historical development, structure, goals, responsibilities, functions, and administration.
	Explain and educate the public about matters concerning his specialty.
	Integrate the various factors that influence the complexity in which living organisms develop and interact.
	Describe interrelationships between human and nimal population growth and density.
	Perform as a member of the public health team.
Epidemiology	Contribute to the diagnostic of animal diseases communicable to man.
	Pariticipate in the control of major occupational health problems.

Participate in the control of human problems related to biting, poisonous, toxic, and other dangerous animals.

Define the meaning and scope of epidemiology.

Assit in investigation, reporting, and implementation of prevalence survey.

Describe different temporal and spatial patterns of diseases.

Revise determinants of diseases, environmental, host, and agent.

Utilize procedures for epidemiological surveillance.

Compare different alternatives approaches to study (restrospective and propective) in terms of case, time, expenses and conclusions possible.

Identify and is able to assist in the control and prevention of non-infectious consequences of animal and human interaction (allergies, infections).

Identify and discusses socio-economic aspects of animal and man interrelationships.

Utilize epidemiological concepts and methods in identifying community health needs.

Identifies the steps in food-associated infections and implements necessary control measures.

Prevent food associated intoxication.

Report and follow up cases in transmissible animal diseases (animal man).

Performs control measures for zoonosis, vaccination, enactments of regulation quarantine or restriction of movement or destruction of property (legal aspects).

Biostatistics	Summarize the importance of statistical methodology in his field. Outline elementary statistical techniques for the collection of data, organization and analysis that will serve as working instruments.
Administration	Collaborate in designing health programs to protect human population from the transmissions, direct or indirect, of animal diseases. Describe economic benefits and liabilities of a desease control program. Assist in the application of the regulations concerning the commercial pet industry. Assist in designing an eradication control program. Participate in designing a control and prevention programs for animal bites bases on the epidemiologic features of the problems.

Describe impact of state and national regulations on the use of drugs and chemicals in veterinary medicine.

Explain rationale, methods of procedure, and evaluation of control programs for arthropodes, pests, birds, rats, unwanted dogs and cats.

Utilize international health organizations which deal with public health.

Participate in designing a prevention and control programs for occupationally related diseases.

Describe interrelationships between human and animal population growth and density.

Utilize veterinary resources in delivery of community health services.

Appraise political and legal aspects of public health (legal aspects).

Environmental Health	Name principles of food processing in terms of preservation, detection, and type of spoilage. Inspect commercial handling of meat. Identify sources of information and regulations on the export and import of meat. Perform ant-mortem and post-mortem inspection of meat animals. Give advice on meat preservation. Differentiate between legal addition to meat and adulteration. Assist in milk inspection and preservation in its processing and distribution procedures. Assist in preventing diseases associated with poultry by inspection and orientation of personnel dealing with poultry.

	Assist in inspection and processing and distribution of seafood according to accepted regulations.
	Assess and gives orientation in regard to environmental aspects of production-animal products, aesthetic consideration, ecologic impact.
	Explain his/her role in food quality control.
	Evaluate the role of the veterinary science technologist in food quality as well as his/her relationship to other professional and workers in the field.
	Value the role of the consumer and apply his/her perceptions in the area of food inspection.
Occupational Health	Identify occupational hazards of veterinary practice.
	Identify occupational hazards of animals and animal products.

Social Sciences	Appraise the Socio-cultural environment as a system with its values, beliefs and mores.
	Discuss the dynamics of social change as a component of the total environment in which man interacts during his life cycle.
Surgery	Management and care of surgical room.
	Pre-operative and post-operative orientation to client.
	Pre-operative and post-operative animal preparation and care.
	Preparation of instrument trays.
	Proper handling of sterilized equipment.
	Administration of pre-and-post operative medications.
	Assist in anaesthetic induction and intubation.
	Assist veterinarian in surgical procedures and narcotic record.

	Keep surgical records log, surgical procedures and narcotic record.
	Monitor parameters of anesthesia.
	Monitor oxygen utilization.
Radiology	Determine and use the technic chart.
	Set X-Ray machine and expose film.
	Properly position the patient.
	Develop X-Ray film.
	Organize and use a file system.
	Administer contrast media.
	Follow recommended safety rules.
Orientation	Perform according to the technologist ethical position.
	Identify animal breed identification.
	Outline the basis of nutrition, animal management and handling, handling and restraint.

	Handle general sanitation (large, small, and laboratory animals). Explain basic housing (large, small, and laboratory animals). Communicate to public and client a general orientation in regard to the prevention of zoonosis.
General Nursing	Render treatment as prescribed. Render emergency care-first aid. Groom patients. Administer enemas. Prepare and administer medication as prescribed by veterinarians. Inject animal. Restraint and safe handling of animal. Recognize variations from normal. Perform dental prophylaxis. Handle fracture inmobilization and bandage techniques.

Hospital Duties	Understand principle of general sanitation of kennel outpatient clinic, hospital. Handle office procedures-reception, telephone, files, inventory, schedule appointments; Supervise lay employees in ward care and house-keeping. Outline routine inmunization. Explain housing and sanitation needs. Practice the procedure for processing rabies specimens. Identify kinds of biological products. Keep pharmacy inventory and restock records. Outline animal dietary needs. Supervise animal daily feeding. Admit patients and follow up admission procedures techniques. Prepare for general examination and take history.

The curriculum here suggested is designed to fulfill the basic requirements indicated previously. It is developed in a period of four academic years, at the end of which the student receives a Bachelors Degree in Sciences with a major concentration in Veterinary Technology. These four years are organized into one full year (General Education in other campuses) followed by three years on the Medical Sciences Campus. The curriculum, starting on the second year, is organized around nine trimesters. The last trimester is left for a Practicum. A variety of learning experiences have been organized in order to fulfill the objectives and the competencies proposed. A broad course in field experience was designed to give the student the opportunity to perform on site observations and evaluations. This course is developed throughout the curriculum starting on the second trimester, second year. A series of field experiences progressively graduated have been planned as applied to the different animals involved. This type of experiences will give the student the opportunity to get acquainted with his field of studies since the beginning of the program.

The planned curricular activities provide for the interrrelationships with other health professionals and sharing of faculty members of different disciplines. The

School of Medicine participates with the College of Health Related Professions with its biomedical faculty in the teaching of biomedical core course and with the teaching of professional courses. The School of Public Health participates with this interdisciplinary relationship with its faculty in the teaching of the biosocial core course, as well as professional concentration in public health and biosocial concepts.

The College of Health Related Professions has as one of its major goals, team teaching. It is through team teaching that an integrated approach to teaching is accomplished as well as the cohesiveness of the program. In addition, the team concept approach is emphasized in the clinical practice area. It is expected that the veterinary technologist will gain insight to the integrated approach to teaching through the learning activities planned for this purpose.

VETERINARY TECHNOLOGY CURRICULUM STRUCTURE

FIRST YEAR

(BASIC)

FIRST SEMESTER

Subject	Credits
Humanities	3
Spanish	3
English	3
Chemistry 101	4
Mathematics	3
Total	16

SECOND SEMESTER

Subject	Credits
Humanities	3
Spanish	3
English	3
Chemistry 102	4
Biology 101	3
Total	16

SECOND YEAR

FIRST TRIMESTER

Subject	Credits
*Bio-Medical Core	10
**Bio-Social Core	3
Total	13

*Bio-Medical Core courses includes the basic sciences such as Anatomy, Physiology, Biochemistry, Parasitology, Pathology, Microbiology.

**Bio-Social Core includes the fundamental knowledge in public health and biosocial sciences. Clinical experiences will be focused on animals.

SECOND TRIMESTER

Subject	Credits
Introduction to Animal Science and Field Experience	4
Paraveterinary Medical Orientation	3
Comparative Anatomy and Physiology of Domestic Animals	3
Total	10

THIRD TRIMESTER

Subject	Credits
Microbiology and Animal Diseases	5
Introduction to Pharmacology	3
Field Experience	2
Total	10

THIRD YEAR

FIRST TRIMESTER

Subject	Credits
Food Hygiene	3
Statistical Methodology	2
Principles of Parasitology and Entomology	3
Field Experience	2
Principles of Management	3
Total	13

SECOND TRIMESTER

Subject	Credits
Zoonosis and Epidemiology	3
Farm Animal Management	4
Field Experience	2
Elective	3
Total	12

THIRD TRIMESTER

Subject	Credits
Elective	3
Genetics	3
Cultural Dynamics of Puerto Rico	3
Field Experience	2
Total	11

FOURTH YEAR

FIRST TRIMESTER

Subject	Credits
Animal Health Technology I	8
Field Experience	2
Total	10

SECOND TRIMESTER

Subject	Credits
Animal Health Technology II	8
Elective	3
Field Experience	2
Total	13

THIRD TRIMESTER

Subject	Credits
Practicum	6
Final Interphase	0
Total	6

Total Credits 130

COURSE DESCRIPTIONS

BASIC COURSES

HUMANITIES 1-2 INTRODUCTION OF THE STUDY OF WESTERN CULTURE (SIX CREDITS)

The course endeavors to bring the student into contact with the history of Western Civilization, in order for him to understand himself as a human being in formation, and to understand his historical situation. It lays stress on the consideration of all problems referring to man, his condition and destiny; emphasizes man as one of the main integrating elements of the world of knowledge, the humanizing function of knowledge, the development of the student's esthetic sensibility, the artistic creation, and the formation of a moral conscience.

The regular course deals with the following topics: Greece and Greek culture (an introduction, Greek history, and the great expression of Greek culture), and Rome and Christianity (Roman history and Christianity and the Hebrew-Christian tradition). It makes use of the great works of Western thought.

In recent years the idea of offering students course variations has spread. At present, besides the regular course, four courses with different topics, but with the common denominator mentioned in the first paragraph, are offered.

In addition to the three hours a week discussion meetings, a one hour lecture is offered weekly.

SPANISH 1-2 BASIC SPANISH COURSE (SIX CREDITS)

The basic Spanish course intends to offer the student such linguistic and literary experiences which will enable him to understand the cultural heritage of contemporary man.

Stemming from the conviction that a thematic structure constitutes a good pedagogical resource, the course has been structured around six main themes, chosen from the hierarchy of those that are fundamental to the individual's life; man facing language and esthetic creation; man facing nature and landscape; man facing society; man facing love; man facing time and death; man facing God and himself.

ENGLISH 1-2 THE BASIC ENGLISH COURSE (SIX CREDITS)

This course has been designed to develop the basic skills needed to understand spoken English, to express ideas orally in an understandable way, to understand and analyze independently literary and informative readings, to express ideas clearly in writing and preparing reports, and to appreciate the estheric values of literary works in English. Text on grammar and oral reading skills are used.

The requirements of this course are three hours a week of discussion classes and one of laboratory or workshop. Students with more serious difficulties must attend the Reading Center where they receive help to correct their difficulties.

CHEMISTRY 101-102 - GENERAL CHEMISTRY - (EIGHT CREDITS) (Four (4) credits during the first semester and four (4) during second semester of the first year). Three hours of lecture per week. One discussion period and one three hours laboratory period per week.

Fundamental principles of the science of chemistry with emphasis on atomic and molecular structure and chemical equilibrium. The laboratory work includes qualitative and analysis of cations and anions.

MATHEMATICS 100 - INTRODUCTION TO MATHEMATICS (THREE CREDITS)

Number systems, exponents, radicals and logarithms, polynomials and rational expressions, functions and graphs. Equations, linear systems, and introduction to linear programming applications.

BIOLOGY 101 - GENERAL BOTANY - (THREE CREDITS) - Six hours of lecture, discussion and laboratory per week.

A general approach to the study of plants and their specially the spermatophyta.

PROFESSIONAL CONCENTRATION

BIO-MEDICAL CORE - 10 Credits

This is a core course that integrates the basic biomedical and clinical content needed to understand further clinical content essential for the understanding of further clinical knowledge in the curriculum. The content of body systems is developed through an integrated and interdisciplinary approach. The focus of this course is clinical with a major emphasis in clinical correlation form the simple to the more complex and from the normal to pathologic conditions.

BIO-SOCIAL CORE - 3 Credits

The core course in Public Health and Bio-Social Sciences for undergraduate students to be offered by the School of Public Health includes man and his environment, community health, health problems and health administration as the main fields to provide a minimal conceptual basis deemed necessary for health professionals.

INTRODUCTION TO ANIMAL SCIENCE AND FIELD EXPERIENCE - 4 Credits

The study of the common breeds and characteristics of domestic animals, including dogs, cats, swine, sheep and goats, horses, beef and dairy cattle, and poultry. Fundamental concepts of animal nutrition, feeding, selection and breeding, and consumption patterns as related to economics.

PARAVETERINARY MEDICAL ORIENTATION - 3 Credits

An introductory course for the beginning student as an orientation to the principles of animal health technology. The professional interrelationship between the veterinary doctor and the animal health technologist, as well as career opportunities, duties, laws and ethics as pertains to the paramedical veterinary personnel in the Veterinary science field will be studied.

COMPARATIVE ANATOMAY AND PHYSIOLOGY OF DOMESTIC ANIMALS - 3 CREDITS

A study of the structure of the following systems, with regerence to their function, and their clinical importance: circulatory, nervous, urinary, skeletal, respiratory, muscular, endocrine, lymphatic, and reproductive. The canine will be the pattern animal against which fundamental anatomical and physiological species variations will be compared too. Detailed regional dissection will be performed on the dog. Some of the more important systems and structures of other species will be performed as time and circumstances permit.

MICROBIOLOGY AND ANIMAL DISEASES - 5 Credits

A general course in fundamental microbiology, including emphasis and study of the common and important disease of large and small animals. The relationship of microorganisms to health and disease in animals will be stressed.

INTRODUCTION TO PHARMACOLOGY - 3 Credits

Study of the major classification of drugs, with selected samples of their functions and effects on animal systems. Knowledge of the basic terminology, usage, routes of administration, toxicity and hazards, sources and storage of drugs.

FIELD EXPERIENCE - 12 Credits

A broad course designed to guide the student and give him the opportunity to perform on-site observation and evaluations by means of a series of field experiences progressively graduated as applied to the different animals involved.

The course, structured into related areas, spans five (5) consecutive two (2) credit trimesters, the approval of each trimester course content is a pre-requisite for the subsequent course. This will constitute a set of complimentary activities as practices to the professional courses.

Settings to be utilized will include: Dairy and beef cattle farms, poultry farms, animal hospitals, zoos, swine production farms, equine farms, etc.

FOOD HYGIENE - 3 Credits

This course introduces the student to procedures and regulations exercised in maintaining and preventing diseases due to food spoilage and/or contamination. Sources of contamination and spoilage are studied and the prevention methods and control are emphasized. The student is geared to develop skills in inspection procedures and techniques, and to master specific regulatory functions. This course emphasizes the use of techniques as they apply to food processing, meat production, meat preservation, antemortem and post mortem inspection of meat animals, food additives, milk and milk products, poultry, food associated intoxications, food associated infections, disposal of offal and environmental aspects of production.

STATISTICAL METHODOLOGY - 2 Credits

In this course emphasis is given to the collection of statistical data and their presentation in the form of tables and graphs. Therefore, among the problems discussed are those related to the registration of births and deaths and the reporting of noticeable communicable diseases.

PRINCIPLES OF PARASITOLOGY AND ENTOMOLOGY - 3 Credits

A study of the most important internal and external parasites of domestic animals, including identification, life cycle, pathogenecity, laboratory diagnosis, control and measures, pathology, and economics and public health importance. The student will required to collect and identify different types of parasites discussed in class.

PRINCIPLES OF MANAGEMENT 3 Credits

Managerial processes that are essential to successful operation of various types of enterprises. Basic principles underlying the management of business organization. Application of principles of authority, accountability, and coordination; problems involving different functions and management levels; internal organization of the enterprise. Emphasis in the decision making process.

ZOONOSIS AND EPIDEMIOLOGY - 3 Credits

Study of animal diseases that may be transmitted to man and of the relationship of various factors determining the frequency and distribution of diseases in a human community. The course also presents descriptive and experimental methodologies. Emphasis is given to diseases distribution patterns. The concept of epidemiology surveillance is examined considering diagnostic processes, data collecting and reporting, analysis of data and types of surveillance.

FARM ANIMAL MANAGEMENT - 4 Credits

A study of the main livestock industries including beef and dairy cattle, horses, poultry and swine, with emphasis on nutrition, modern housing and handling facilities for animals, restraint, herd health management, record keeping and marketing.

GENETIC - 3 Credits

The course will include discussion and analysis of classical genetics up to gene mapping, the dissection of the locus into cistroms, problems of human genetics. In addition, it will consider basic elements of cytogenetics, population genetics, developmental, and biochemical genetic, the hypothesis of DMA structure and mode of replication.

CULTURAL DYNAMICS OF PUERTO RICO - 3 Credits

Study and analysis of the essential elements that have contributed to the formation of the Puerto Rican culture. Integrated emphasis will be given to geographic, historical, social and economic components. Events and implications will be placed in time and space so as to help students in their inquiry, problem solving, analysis, synthesis competencies.

ANIMAL HEALTH TECHNOLOGY I AND II - 16 Credits (8 Credits eahc trimester)

A comprehensive study of the different fields of clinical importance to the technologist as an assistant to the veterinarian. Emphasis will be placed on General Hospital

Procedures, Fundamentals of Radiology, laboratory procedures, surgical support, animal nursing, principles of first aid, and laboratory animal management.

PRACTICUM - 6 Credits

A clinical experience where the student will have the opportunity to obtain in-depth knowledge and practice in the area of his selection.

3. COURSE OUTLINES

Attached at the end of the Report.

N. EVALUATION

The evaluation model to be utilized in the proposed program is the C.I.P.O. (Content, Input, Process and Outcome). This evaluation model combined the models developed by Stufflebeam, from Ohio State University and Marvin C. Alkins form the University of California at Los Angeles, Center for the Study of Evaluation (See Appendix 5).

O. RESOURCES AND FACILITIES

1. LIBRARY

All veterinary medical references are located in the Main Library of the Medical Sciences Campus, Building C. It contains 43 books in veterinary medicine and 5 subscriptions to professional journals, approximately 79,290 books and periodicals, one of the largest collections in Puerto Rico. The facilities and services of this library provide the means for the intellectual growth of the students and faculty. Bibliography in the area of veterinary medicine will be increased.

The building which houses the library has six floors. There are librarians and clerical offices on each floor. The facilities of the library are distributed from the second to sixth floor as follows:

1. Second Floor - Director's office, Special Collections, Circulation Department, and Reserve Collection
2. Third Floor - Reference books, general book collection, book catalogs & technical services
3. Fourth Floor - Periodical catalog, journals collection from 1953 to date
4. Fifth Floor - Book binding office, continuation of journals collection
5. Sixth Floor - Duplicate periodicals and journals dated before 1952

The Veterinary Technology Program students may avail themselves of all the basic sciences and health related references contained in this library. A more comprehensive collection of references comprising the natural sciences, behavioral sciences, education, and the humanities is available to those students enrolled in courses in the Río Piedras campus. This material is also available to those students not taking courses in the Río PIedras Campus by menas of an interlibrary loan system. Utilizing the same system, all students may borrow reference material from numerous libraries in the continental United States.

The services offered by the library include loans of books and periodicals orientation to library services, orientation as required in search of references, photocopy machines, duplication of certain frequently used articles and lists of bibliographies on any subject as requested by the Faculty.

The library utilizes the same classification as the National Library of Medicine. The schedule of the library is as follows:

Monday to Friday	8:00 a.m. to 11:00 p.m.
Saturday	8:00 a.m. to 10:00 p.m.
Sunday	9:00 a.m. to 10:00 p.m.
	(Closed on Holidays)

There is a library committee who acts in an advisory capacity to the librarian. This committee includes representatives from different faculties and student bodies and will include the faculty of the Veterinary Technology Program. At the present time, there is a library committee, appointed by the Chancellor of the Medical Sciences Campus, which is engaged in a thorough evaluation of library facilities in order to improve them in the near future.

2. Audio-Visual Services

The Division of Audio-Visual Communication is located in the basement and first floor of the building which houses the library in the Medical Sciences Campus. It contains an orientation office, Director's office, various camera studios, closed-circuit television and videotape machine studios, office for the preparation of films and transparencies, office for the repairing of audio-visual equipment, and an autotutorial laboratory. The following audio-visual services are available at the Medical Sciences Campus:

--- General orientation of audio-visual resources and their use as educational aids.

--- Orientation on audio-visual media as requested from other sources.

--- Production of various educational aids such as monographs, transparencies and videotapes by the section of graphical arts, films, and posters.

--- Audio-visual resource center for individual study.

--- Projection service to the faculty upon request.

--- Assessment of instructional design.

--- Media cataloguing office which offers references of educational materials obtainable from market.

--- Periodic written information of educational material acquired.

As a result of the general reorganization of the Medical Sciences Campus and in harmony with modern educational trends, the Library and the audio-visual services will be merged in order to centralize de educational resorces center.

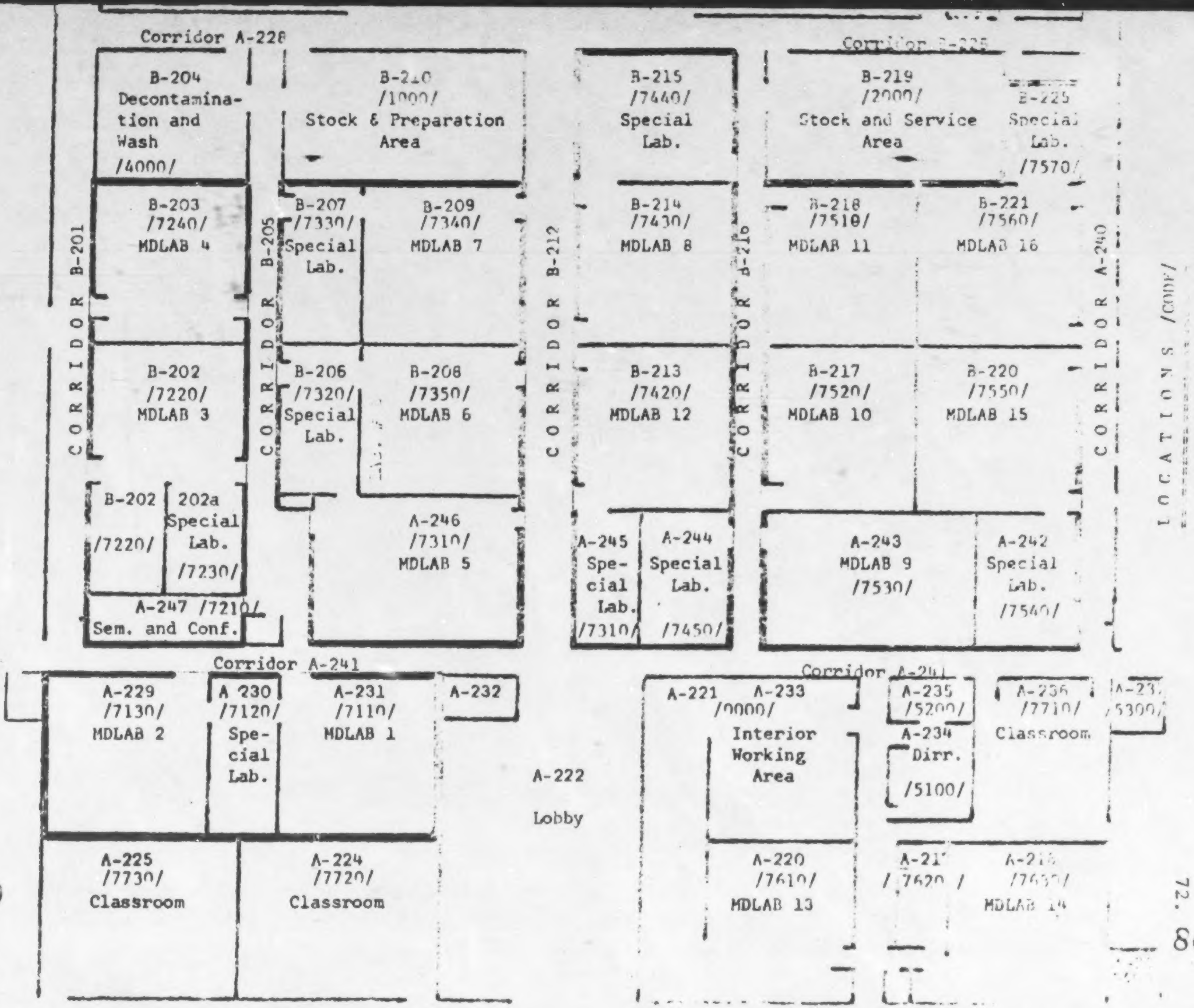
The College of Health Related Professions is developing a Learning Resource Center for students and faculty. The software for instructional design is being developed.

3. Laboratory, Classroom and Clinical Facilities

The Multidisciplinary Laboratory number 6, illustrated on page 72, provides the facility for instruction of Comparative Anatomy and Physiology. Additional specialized equipment must be purchased.

The laboratory facility for the instruction of biomedical sciences, microbiology and animal diseases will be the same used for medical students as well as for students of the College of Health Related Professions. As in Anatomy and Physiology, additional specialized equipment must be purchased.

The Experimental Surgery Laboratory on the 10th. floor of the Medical Sciences building provides facilities for courses in veterinary sciences. This experimental surgery laboratory is equipped with five surgical rooms which will provide practical experiences and demonstrations for students. Furthermore, it provides experiences in surgical assisting and anesthesiology.


Corridor A-228
B-204 Decontamination and Wash /4000/
B-210 /1000/ Stock & Preparation Area
B-215 /7440/ Special Lab.
Corridor B-225
B-219 /2000/ Stock and Service Area
B-225 Special Lab. /7570/
B-203 /7240/ MDLAB 4
B-207 /7330/ Special Lab.
B-209 /7340/ MDLAB 7
B-214 /7430/ MDLAB 8
B-218 /7510/ MDLAB 11
B-221 /7560/ MDLAB 16
CORRIDOR B-201
CORRIDOR B-205
CORRIDOR B-212
CORRIDOR B-216
CORRIDOR A-240
LOCATIONS /CODE/
B-202 /7220/ MDLAB 3
B-206 /7320/ Special Lab.
B-208 /7350/ MDLAB 6
B-213 /7420/ MDLAB 12
B-217 /7520/ MDLAB 10
B-220 /7550/ MDLAB 15
B-202 /7220/
202a Special Lab. /7230/
A-246 /7310/ MDLAB 5
A-245 Special Lab. /7310/
A-244 Special Lab. /7450/
A-243 MDLAB 9 /7530/
A-242 Special Lab. /7540/
A-247 /7210/ Sem. and Conf.
Corridor A-241
A-229 /7130/ MDLAB 2
A 230 /7120/ Special Lab.
A-231 /7110/ MDLAB 1
A-232
A-222 Lobby
Corridor A-241
A-221
A-233 /0000/ Interior Working Area
A-235 /5200/
A-234 Dirr. /5100/
A-236 /7710/ Classroom
A-237 /5300/
A-225 /7730/ Classroom
A-224 /7720/ Classroom
A-220 /7610/ MDLAB 13
A-217 /7620/
A-218 /7630/ MDLAB 14

The Diagnostic Animal Laboratory located at the town of Dorado, under the Department of Agriculture, offers the facility for the practice of some laboratory techniques. In addition, the Department of Medical Technology in the College of Health Related Professions offers facilities and resources in the teaching and practice of diagnostic laboratory procedures and techniques for the veterinary technologist.

For the purpose to offered specific experiences and techniques as indicated in the course, Animal Health Technology I and II, it is planned to rent a land. This land will be equipped with the necessary equipment and facilities needed for the development of proposed competencies.

Other facilities and resources available for clinical experiences and field experiences are those offered by public, private and federal agencies. Among these are: (See Appendix 7, Agreements).

1. Department of Health, Secretary, Dr. Jaime Rivera Dueño, Health Inspection Division: dairy farm, milk pasteurizing plants, restaurants and hotels.
2. Department of Agriculture, U.S.D.A./A.P.H.I.S/(dairy farm/beef cattle herds/swine herds/poultry flocks/Veterinary Diagnostic Laboratory).
3. Department of Agriculture, Commonwealth of Puerto Rico, Veterinary Laboratory at Dorado.
4. Veterinary private hospital and clinics.

5. University of Puerto Rico, Medical Sciences Campus (Animal House and Experimental Surgery Laboratory).
6. U.S.D.A. Meat Inspection Service, (beef/swine/poultry/slaughterhouses; beef/swine/poultry processing plants, food processing plants.

VI. BUDGET ESTIMATE

A. Personnel for the First Year

		% of the time spent on program	Annual Salary	Fringe Benefit	Sub-Total
1.	Program Director, D.V.M.	100%	$24,000	$27,626	$27,626
2.	Assistant Director and Instructor, D.V.M.	100%	20,000	3,286	23,286
3.	Instructor in Veterinary Sciences, D.V.M.	100%	18,000	3,116	21,116
4.	Secretary	100%	7,200	1,654	8,854
5.	Animal Health Assistant	100%	6,000	1,482	7,482
6.	Diener or livestock caretakers	100%	4,800	1,310	6,110
			$80,000	$14,474	$94,474

B. Fringe Benefits, First Year

Retirement funds	7.00% of salary
Social Security	5.85% of $16,500
State Insurance Fund	1.50% of salary
Unemployment	.5% of $4,200
Medical Plan	$30/month = 360
X mas Bonus	4% of $6,000 = 240

Contractual Expenses for the Teaching of the following courses:

1. First Year

   Chemistry 101-102
   Mathematics
   English
   Spanish
   Humanities
   Biology 101

   Estimated $15,000

2. Second Year

   Bio-Medical Core
   Bio-Social Core
   Introduction to Pharmacology
   Comparative Anatomy and Physiology

   Estimated $10,000

3. Third Year

   Public Health
   Statistical Methodology
   Principles of Entomology and Parasitology
   Principles of Management

   Estimated $15,000

Breakdown of:

Supplies Category:

Office Supplies	$ 6,000
Laboratory Materials	10,000
Livestock Feeds	15,000
Audiovisual and library (films, tapes)	20,000
Vehicle maintenance material	2,000
	$ 53,000

Equipment Category:

Two vehicles (Transportation), (mini bus, pick up 3/4 tons)	$ 25,000
Audiovisual equipment	23,000
Surgical $ Animal handling equipment	108,425
	$156,425

BUDGET CATEGORIES

	First	Second	Third	Fourth	Totals
Personnel	$ 80,000	$ 88,000	$ 96,800	$106,480	$371,280
Fringe Benefits	14,474	15,921	17,513	19,264	67,172
Travel	4,000	4,000	4,000	4,000	16,000
Consultant Services	6,000	6,000	6,000	4,000	22,000
Contractual Services	15,000	10,000	15,000	0	40,000
Supplies	53,000	40,000	35,000	35,000	163,000
Equipment	156,425	8,000	4,000	2,000	170,425
Land Lease	25,000	25,000	25,000	25,000	100,000
Total Direct Cost	$353,899	$196,921	$203,313	$195,744	$949,877
Indirect Charges (8%)	28,312	15,754	16,265	15,659	75,990
Total	382,211	212,675	219,578	211,403	1,025,867

Explanation of Fringe Benefits:

	Position	Salary	Social Security of maximum $ 16,000	Retirement 7% of Total	State Insurance Fund 1.50 of Total	Christmas Bonus-4% of $6,000	Medical Plan $360 / year	Unemployment Insurance .5% of $4,200	Totals
1.	Program Director	$24,000	$ 1,680	$965	$360	$ 2	$360	$240	$ 3,626
2.	Assistant Director & Instructor	20,000	1,400	965	300	21	360	240	3,286
3.	Instructor in Veterinary Science	18,000	1,260	965	270	21	360	240	3,116
4.	Secretary	7,200	504	421	108	21	360	240	1,654
5.	Animal Health Assist.	6,000	420	351	90	21	360	240	1,482
6.	Diener	4,800	336	281	72	21	360	240	1,310
									$ 14,474

VII. RECOMMENDATIONS AND STEPS FOR THE IMPLEMENTATION OF THE PROGRAM IN PUERTO RICO

A. Recommendations

1. Educational institutions where the community has similar needs for a health-trained veterinary assistant should evaluate and consider this program as a model for meeting the particular needs of the community.
2. The University of Puerto Rico, thorough its Medical Sciences Campus should take immediately steps to implement this program in light of the recent emphasis on more effective health - delivery services, particularly in the disease prevention and environmental control.

B. Steps for the implementation of the program in Puerto Rico

1. Explore government and private sources for funding.
2. Develop job descriptions for the teachers and administrative staff.
3. Recruit the qualified teaching and administrative staff.
4. Promote the program adequately.
5. Delineate specifically the instructional design to include other available and required physical and human resources.

FOOTNOTES

1/ U.S. Department of Health, Education and Welfare, Office of Education, Veterinary Science Technology - Guide for a Training Program, 1973.

2/ Amalia Llabrés de Charneco, "Survey on the Manpower Needs for Veterinary Assistants for Determining the Feasibility for Setting Up Curriculum Programs in the Area of Veterinary Science Technology at the Regional College of Inter-American University," April 30, 1976.

1/ Journal of Allied Health, Winter 1977, p. 39.

2/ Ibid, p. 39.

* Dr. Luis R. Díaz substituted Dr. Ramón Claudio in May, 1977.

3/ Herold Kemp, Instructional Design, Belmont, California, Fearon Publishers, 1971, p. 20.

4/ Ibid.

5/ James Popham, Educational Evaluation, Englewood, Cliffs: New Jersey, 1975, p. 14.

6/ Ibid.

* Project Coordinator.

** College of Health Related Professions.

7/ U.S.D.A. refers to United States Department of Agriculture.

8/ A.P.H.I.S. refers to Animal and Plant Health Inspection Service.

BIBLIOGRAPHY

Acker, Duane C., Animal Science and Industry. Englewood Cliffs, New Jersey: Prentice-Hall, 1962.

Arrington, L.R., Introductory Laboratory Animal Science. Danville, Ill.: The Interstate Printers and Publishers, Inc., 1972.

Bisseru, Balidea, Diseases of Man Acquired From His Pets. New York: J. B. Lippincott, 1968.

Blood, Douglas C. and J. A. Henderson, Veterinary Medicine. Baltimore: The William Wilkins Co.

Bloom, Benjamin S., et. al. Taxonomy of Educational Objectives, Handbook I: Cognitive Domain. New York: David McKay, 1956.

Handbook on Formative and Summative Evaluation on Student Learning. New York: McGraw Hill, 1971.

Coles, Embert H., Veterinary Clinical Pathology. Philadelphia: W.B. Saunders, 1967.

Collins, Vincent J., Principles of Anesthesiology. Philadelphia: Lea and Febiger, 1966.

Conley, Virginia, Curriculum and Instruction in Nursing. Boston: Little, Brown and Co., 1973.

Cross, Patricia K., Accent on Learning. San Francisco: Josey - Bass Publishers, 1976.

Fox, T. Hall and Elvebach, L., Epidemiology, Man and Disease. New York: The Macmillan Co., 1972.

Frandson, R.O., Anatomy and Physiology of Farm Animals. Philadelphia: Lea and Febiger, 1965.

Green, John A., Introduction to Measurement and Evaluation. New York: Dodd, Mead, and Co., 1970.

Greenbaum, William et. al., Measuring Educational Progress. New York: McGraw-Hill Book Co., 1977.

Gronlund, Norman E., Measurement and Evaluation in Teaching. Second Edition. New York: The Macmillan Co., 1971.

Jones, T., Veterinary Necropsy Procedures. Philadelphia: J. B. Lippincott Co., 1959.

Kemp, Jerrold E., Instructional Design. Belmont, California: Fearon Publishers, 1971.

Kirk, Robert W. and Stephen I. Bistner, Handbook of Veterinary Procedures and Emergency Treatment. Philadelphia: W. B. Saunders Co., 1968.

Leonard, Ellis P., Fundamentals of Small Animal Surgery. Philadelphia: W.B. Saunders Co., 1968.

Lillienfeld, Abraham, Foundations of Epidemiology. First Edition. New York: Oxford University Press, 1976.

Linne, Jean J. and Karen M. Ringrud. Basic Laboratory Techniques for the Medical Laboratory Technician. New York: McGraw-Hill Book Co., Inc., 1970.

Mac Mahon, B. Pugh T., Epidemiology, Principles and Methods. First Edition. Boston: Little Brown and Co., 1970.

Mausner, A., Epidemiology. First Edition, Philadelphia: W. B. Saunders Co., 1974.

Maxcy, Roseman, Preventive Medicine and Public Health. Tenth Edition. New York: Appleton Century Crofts, 1973.

Mehrens, William A. and Lehmann, Irvin J. Measurement and Evaluation in Education and Psychology. New York: Holt, Rinehart and Winston, Inc., 1969.

Metcalf, Lawrence ed., Values in Education. Washington: N.C.S.S., 1971.

Miller, G. E., Teaching and Learning in Medical Schools. Cambridge, Mass.: Harvard University Press, 1961.

Neagly, Ross and Evans, N. Dean, Handbook for Effective Curriculum Development. Englewood Cliffs, New Jersey: Prentice-Hall Inc., 1967.

Popham, W. James, Educational Evaluation. Englewood Cliffs, New Jersey: Prentice-Hall, Inc., 1975.

Pritzkan, Philo T., Dynamics of Curriculum Improvement. Englewood Cliffs, New Jersey: Prentice-Hall, Inc. 1959.

Saylor, J. Galen and Alexander, Williams M. Curriculum Planning for Modern Schools. New York: Holt, Rinehart and Winston, 1966.

Schwabe, Calvin W., Veterinary Medicine and Human Health. First Edition. The William and Wilkins Co., 1964.

Simpson, E. J., The Classification of Educational Objectives, Psychomotor Domain. Urbana, Ill.: University of Illinois, 1966.

Stanley, Julian C. and Hopkins, Kenneth D., Educational and Psychological Measurement and Evaluation. Englewood Cliffs, New Jersey: Prentice-Hall, 1972.

Taba, Hilda, Curriculum Development: Theory and Practice. New York: Harcourt, Brace and World, Inc., 1962.

Taylor, Peter A., Readings in Curriculum Evaluation. Dubuque, Iowa: William C. Brown Co., 1972.

Thornton, Horace, Textbook of Meat Inspection. London: Bailliere, Tindall and Cox, 1962.

United States Department of Agriculture, Meat Inspection Regulations (U.S. Federal Register Vol. 3, Number 193, October 30, 1970). Washington, D.C.: U.S. Goverment Printing Office, 1970.

APPENDICES

APPENDIX I

TASK WORK SCHEDULE

UNIVERSITY OF PUERTO RICO
MEDICAL SCIENCES CAMPUS
COLLEGE OF HEALTH RELATED
PROFESSIONS

Project for the development of an Educational Program leading to a Baccalaureate Degree in Veterinary Science Technology

TASK WORK SCHEDULE

At the end of the project year the Planning Group will have produced plans for an educational program leading to a Baccalaureate Degree in Veterinary Science Technology. The following objectives will be met in the process of developing the plan.

OBJECTIVES	ACTIVITIES	RESOURCES	DATE TO BE ACCOMPLISHED
1. The Dean of the College of Health Related Professions with the advice of his staff works, writes and submits a proposal to finance the development of a program leading to a bachelor degree in Veterinary Science Technology.	1.1. Organize a task force 1.2. Review the literature on Veterinary Science Medicine and Educational programs on the field of veterinary science technology.	Dr. Alvin Price Dean of College of Health Related Professions, Staff	June 1976
2. The Dean of the College Health Related	2.1. Organize the staff for the project year. 2.2. Recruit candidates for Advisory Committee and Planning Group	Dean of College Health Related Professions	October 1976

TASK WORK SCHEDULE
(Cont.)

OBJECTIVES	ACTIVITIES	RESOURCES	DATE TO BE ACCOMPLISHED
Professions with the advice of his staff and selectes and make appointments of Planning Group, Project Staff and Advisory Committee in order to plan the project year activities.	2.3 Meet with the Project Director, Planning Group and some members of the staff for orientation purposes (objectives of the project, tasks and functions)	Dean of College Health Related Professions	October 1976
	2.4 Discuss and agree on location and time table for two curriculum workshops	Planning Group	October 1976
	2.5 Agree upon and schedule meetings with different groups		
	2.5.1 Planning Group 2.5.1.1 - Weekly meetings to present the work done during the week.	Planning Group	
	2.5.2 Advisory Committe. 2.5.2.1 - Three meetings during the project yeard activities to discuss, make comments and recommendations to the Planning Group		

TASK WORK SCHEDULE
(Cont.)

OBJECTIVES	ACTIVITIES	RESOURCES	DATE TO BE ACCOMPLISHED
	about the work presented.	Advisory Committee	October 1976
3. The Project Director with the advice of the Dean of the College of Health Related Professions and staff designs the administrative structure of the project and formulates the function of the Planning Group.	3.1 Hold brainstorming sessions within the framework of the proposal objectives, to determine tasks functions and possible activities to be developed.	Dean of the College of Health Related Professions	October 1976
	3.2 Present, discuss and modify the administrative structure of the Project	Staff and Project Director	
4. The Curriculum Specialists will complete analysis of background literature to establish a framework within which to conceptualize roles for the Veterinary Technologist and skills and knowledge he/she should have	4.1 Consult relevant literature 4.1.1. Analyze and investigate the available literature in the field of Veterinary Science Technology, which will give a frame of reference to the planned activities. 4.1.2. Classify similar educational program which offer an associate degree in	Curriculum Specialists Specialist in Veterinary Medicine	October 1976

TASK WORK SCHEDULE
(Cont.)

OBJECTIVES	ACTIVITIES	RESOURCES	DATE TO BE ACCOMPLISHED
	Veterinary Science Technology		
5. The Evaluation Specialist develops a comprehensive evaluation model for the program leading to a bachelors degree in Veterinary Science Technology.	5.1 Analyze Evaluations Models		
	5.1.1 Survey the literature in the field of evaluation related to educational programs, specially those in the health sciences field and performance based education.	Evaluation Specialists	October 1976
	5.1.2 Identify evaluation model to be utilized in the evaluation of the proposed program.		
	5.1.3 Define education areas identify in the evaluation model.		
6. As a framework for curriculum development information of present and future needs of private and public agencies for	6.1 Gather information on the needs which public and private agencies face.		
	6.1.1 Develop a questionnaire	Curriculum Specialists	November 1976

TASK WORK SCHEDULE
(Cont.)

OBJECTIVES	ACTIVITIES	RESOURCES	DATE TO BE ACCOMPLISHED
veterinary science technologists services is gathered and assessed.	and interview guide to obtain information	Curriculum Specialists in Veterinary Medicine and Evaluation Specialists	November 1976
	6.1.2 Administer the questionnaire and carry out interviews.		
	6.1.3 Asses the results	" "	" "
7. As part of curriculum development a rationale for the program is defined.	7.1 Define the orientation of the program.		
	7.1.1 Orienting the program of Veterinary Science Technology within the framework of public health.	Curriculum Specialists and Specialists in Veterinary Medicine	November 1976
8. A final evaluation design is accepted by the Planning Group.	8.1 Suggest changes and revise evaluation design.	Planning Evaluation Specialist	November 1976
9. The task work schedule and other activities to date are discussed and accepted.	9.1 Hold one day meeting with the Advisory Committee to discuss Task Work Schedule and other project outputs.	Planning Group Advisory Committee	November 1976

TASK WORK SCHEDULE
(Page 6, Rev. July 1977)

OBJECTIVES	ACTIVITIES	RESOURCES	DATE TO BE ACCOMPLISHED
10. Content for the program is being developed	10.1 Content 10.11 Define the area of content 10.12 Identify the core areas	Curriculum Specialists and specialists in Veterinary	December 1977
11. Competencies & objectives for the students in the field of Veterinary Technology are developed	11.1 Define competences and objecttives 11.1.1. Delineate the general & specific objectives based on identified competencies	Curriculum Specialists, Specialists in Veterinary Medicine	Jan-Feb. 1977
12. A draft containing the format content, & scoring method is presented for consideration & approval	12.1 Discuss the draft contaning format, content, and scoring procedures at a regular weekly meeting	Evaluation Specialist	February 1977

TASK WORK SCHEDULE
(Page 7, Rev. July 1977)

OBJECTIVES	ACTIVITIES	RESOURCES	DATE TO BE ACCOMPLISHED
13. A curriculum workshop is planned & conducted for participating faculty from Bio-Medical & Bio-Social Sciences Planning Group & Advisory Committee	13.1 Plan, organize, and conduct a curriculum workshop.	Planning Group	March 1977
	13.2 Evaluate the results	Office of Curriculum Affairs of College Health Related Professions	March 1977
14. A progress report is presented & discused with the Advisory Committee	14.1 Hold a one day meeting with the Advisory Committee to discuss work performed by curriculum specialists, evaluation specialists & other project outputs	Curriculum Specialists, Planning Group, and Advisory Committee Evaluation	March 1977
15. Complete the definition of course content, descriptions, strategies for learning experiences & evaluation criteria.	15.1 Define and describe program course	Curriculum Specialists & Specialists in Veterinary Medicine	April 1977
	15.2 Design strategies for course implementation	Curriculum Specialists and Evaluation Specialists	April 1977

TASK WORK SCHEDULE
(Page 8 Rev. July 1977)

OBJECTIVES	ACTIVITIES	RESOURCES	DATE TO BE ACCOMPLISHED
	15.3 Design evaluation criteria for learning experiences	Curriculum Specialists and Evaluation Specialist	May 1977
	15.4 Assist the curriculum specialists in the development of evaluation criteria for learning activities.	Evaluation Specialist	May 1977
6. Complete the evaluation instruments and present them to the Planning Group for the final approval	16.1 Present and discuss evaluation instruments at a regular weekly meeting	Evaluation Specialists	May 1977
7. A procedure is designed to determine the faculty student ratio and faculty recruitment for the proposed educational program	17.1 Design procedures to determine faculty student ratio for classroom and clinical teaching	Planning Group	May 1977
	17.2 Explore for the possible faculty candidates for the program	Planning Group	May 1977

TASK WORK SCHEDULE
(Page 9 Rev. July 1977)

OBJECTIVES	ACTIVITIES	RESOURCES	DATE TO BE ACCOMPLISHED
	17.3 Contact Veterinary Medicine Association for possible orientation in the selection of faculty for the proposed educational program	Planning Group	May 1977
	17.4 Design functions and responsibilities of faculty	Planning Group	
8. A plan is designed for the program in Veterinary Technology to promote community involvement and participation	18.1 Meeting with personnel of Orientation Office of the Medical Sciences Campus with the purposes to organize promotional activities	Planning Group Office of Orientation Medical Sciences Campus Medical Sciences Campus	June 1977
	18.2 Meeting with different groups in the community High Schools, and institutions of higher learning such as Regional Colleges		July 1977
	18.3 Develop a brochure for the educational program		July 1977
	18.4 Make use of mass media		July 1977

TASK WORK SCHEDULE
(Page 10, Rev. July 1977)

OBJECTIVES	ACTIVITIES	RESOURCES	DATE TO BE ACCOMPLISHED
	for the promotion of the program		
	18.5 Meet with the Veterinary Medical Association	Planning Group	July 1977
	18.6 Make field visits to private and public institutions which have to do with the case of animals	Planning Group	
19. A plan is designed for recruitment, selection, induction, admission, retention and graduation of students in the proposed program in Veterinary Technology	19.1 Hold meetings with orientation office of Medical Science Campus to work out for a recruitment plan	Orientation Office Planning Group	July 1977
	19.2 Establish norms for selections, inductions, admissions, and graduation for candidates to the program in Veterinary Technology	Orientation Office	

TASK WORK SCHEDULE
(Page 11, Rev. July 1977)

OBJECTIVES	ACTIVITIES	RESOURCES	DATE TO BE ACCOMPLISHED
20. A plan is designed for promoting among Veterinary Medical Association, Public Agencies concerned and Legislature the need for certification of the Veterinary Technologist	20.1 Hold meetings with Veterinary Medical Association, Public Agencies and Legislature to discuss the regulation of the practice of the Veterinary Technology in P. R.	Planning Group Veterinary Medical Association, Public Agencies concerned. Selected members of Legislature	July 1977
21. A second curriculum workshop is planned and conducted for participating faculty from Bio-Medical and Bio-Social Sciences, Planning Group and Advisory Committee	21.1 Plan, organize and conduct a curriculum workshop	Planning Group	July 1977
	21.2 Evaluate the results	Planning Group Office of Curriculum Affairs	
22. A final draft report of the project is presented to the Advisory Committee for comments and recommendations	22.1 Hold a one day meeting with the advisory Committee to discuss the curriculum plan for the proposed program and the draft of the final report, and obtain comments &		

TASK WORK SCHEDULE
(Page 12, Rev. July 1977)

OBJECTIVES	ACTIVITIES	RESOURCES	DATE TO BE ACCOMPLISHED
	recommendations		July 1977
	22.2 Discuss and make modifications of the final draft of the document which contains the educational program in Veterinary Technology	Planning Group	Aug. & Sept. 1977
	22.3 Present the final document to the Dean of College of Health Related Professions and Chancellor	Planning Group	September 1977

APPENDIX 2

RESEARCH REPORT

RESEARCH REPORT

SURVEY ON THE MANPOWER NEEDS FOR VETERINARY ASSISTANT FOR DETERMINING THE FEASIBILITY FOR SETTING UP CURRICULUM PROGRAMS IN THE AREA OF VETERINARY SCIENCE TECHNOLOGY AT THE REGIONAL COLLEGES OF INTER AMERICAN UNIVERSITY

Prepared for:

Inter American University Regional Colleges Administration as part of a proposal for the establishment of a Veterinary Science Technology Program submitted by Dr. María Socorro Lacot, Consultant on Vocational and Technical Education

Prepared by:

Amalia Llabrés de Charneco, Ph.D.
Research Consultant

Interviewer:

Máximo Caballero, M.A.
Field Researcher

April 30, 1974

Problem and Objectives

Undergraduate education comprises the largest and most important instructional function at Inter American University, accounting for over 90% of the University enrollment. 1/ Although the aims, structure and content of the undergraduate programs are largely those of liberal arts colleges, Inter American University is making great efforts to develop as a service university.

Most Inter American undergraduates enroll in those programs most directly related to specific occupational careers such as teacher education (40.4%) and economics and business administration (19.6%). 2/ The selection of fields of study in the regional colleges (two-year branches), follows the same patterns as those of the four-year campuses.

The economics conditions of the majority of the undergraduates and their socio-educational background are not compatible with the scholarly standards of the liberal arts colleges. To be responsive to the needs, interests and capabilities of its student population, Inter American University is seeking ways of expanding its career-oriented offerings.

1/ McFarlane & Associates, Undergraduate Education at Inter American University, Institutional Research Report #2, December, 1972.

2/ Ibid

Inter American University is interested in establishing educational and training programs to satisfy today's occupational opportunities and to meet future needs. The satisfaction of the manpower needs of an economy is the prime objective of any career-oriented training.

Presumably, one of the occupational areas with existing, new and emerging occupational needs is that of Health, especially in the fields of paraprofessionals. Nevertheless, areas of greatest need can only be identified through manpower surveys and projections coupled with an overview of the schools offering such education.

For this reason Inter American University, which has been considering the possibility of incorporating among its two-year offerings training programs in the field of Veterinary Assistant, has had this study made, Thus, the main objective of this study has been to survey the job market and offerings of the afore-mentioned occupation to analize the feasibility of establishing two-year training programs in the area of Veterinary Assistant in the Regional Colleges of Inter American University.

For the solution of the problem, the major objectives of the study were classified in three areas as follows:

Job Market: To determine the employment outlook of this occupation in Puerto Rico, including the need for this type of paraprofessional and probable job openings.

Current Offerings in This Area: To determine the current course offerings in this area and to what degree they meet manpower needs.

Curriculum Development: To identify the occupation to be studied and to define its job requirements including job title and description, job tasks and requirements for training.

Procedure Used in Collecting and Treating Data

General Statements of Method

As this study centered mainly on current practices, the normative survey or descriptive method was used. Information related to the occupation under study was derived from primary or original sources through observations, interviews and questionnaires. Secondary sources such as reports, studies and other types of literature were also used.

The study was conducted in five phases: determination of population and sample, development of research instruments, interviewing and data collection, analysis of data and report of findings.

Population and Sample

The population of the study included: workers in the occupation, both new and experienced; employers; administrators or teachers of institutions with programs in the occupation and government officials.

Almost all key personnel related to the occupation who might give insight into the problem under consideration and provide pertinent information for the study were interviewed. Name and professional position of persons interviewed are listed at the end of this report.

Due to the limited time available for carrying out the survey and as the majority of the professionals and paraprofessionals in the field of Veterinary Science are located in the metropolitan area, the survey was confined to the data collected in this area.

Research Instruments and Data Collection

Five data-collecting instruments were developed to obtain the information required for each of the objectives set up for the study, as follows:

Open Interview Form-for officials of employment agencies and other personnel related to the field surveyed.

Questionnaire for Potential Employers of Paraprofessionals in the field surveyed.

Questionnaire for Employer

Questionnaire for Employees

Questionnaire for the Agency or Institution offering programs in the field surveyed.

These instruments were prepared in Spanish and properly validated. A copy of each of them and its English translation is appended.

Interviewing and data collection took around three weeks.

In addition to the information collected in the survey questionnaires, other pertinent material such as a complete list of veterinary practioners in Puerto Rico, Examining Board Law and Regulations and current law on Veterinary Medicine in Puerto Rico were collected.

Presentation and Interpretation of Data

I. The data collected were obtained from the survey of primary sources as follows:

Category	Number
Prospective Employers	2
Employers	6
Employees	7
Key Persons in the Field (Open Interview Form	11
Institutional Program	-
TOTAL	26

II. Data collected from primary sources were tabulated and analyzed and a summary of findings follows:

A. Prospective Employers (2)

1. General information about the properspective interviewed:

Profession: Veterinary Doctors 100%

Years of Experience in the Profession:

Less than 5 years of experience 50%

Number of Veterinary Assistants employed:

One Assistant	16 1/3%
Two Assistants	50%
Three Assistants	16 1/3%
Four or More Assistants	16 1/3%

Preparation of Assistants Employed:

Less than High School	15%
High School	65%
High School plus Correspondence Course in Veterinary Science	15%
College Preparation	5%

Additional Preparation which they think their Assistant should have:

Laboratory	34%
X-Ray	16%
Typewriting	16%
English	34%

Duties or Responsibilities of the Assistant:

Recepcionist	10%
Cleaning hospital & cages	20%
Assisting in surgery	10%
Organize and sterilize equipment	10%
Apply medicines	15%
Apply gas anesthesia	4%
Feed animals	4%

More than 25 years of experience 50%

Type of Agency: Private 100%

2. Information related to the occupation:

Need of Assistant 100%

Would be able to Employ One 100%

Part-Time 50% (Salary $300 per month)

Full-Time 50%

,, Opinion about employment opportunities in Puerto Rico in this field:

Yes 50%

, No 50%

B. Employers (6)

1. General Information about the Employers Interviewed:

Sex: Male 100%

Degree: Veterinary Doctor 100%

Specialization: Small species 66 2/3%

Large species 33 1/3%

Type of Agency: Private 83%

Public 17%

Years of Experience in the profession:

5 to 10	33%
12 to 20	17%
More than 20	50%

2. Information related to the Employee (Veterinary Assistant)

Kind of Assistant: Veterinary 100%

Take urinary and saliva samples	4%
Help in treatment of animals	15%
Run errands	4%
Cannot be assigned other responsibilities because of lack of knowledge	4%
Years of Employment as Assistant	
Less than one year	29%
1 to 3 years	29%
5 or more years	42%
Quality of work:	
Excellent	16%
Satisfactory	50%
Average	34%

3. Opinion Related to the Occupation

Need for veterinary assistants in your profession:

Yes	100%

Schools in Puerto Rico offering this type of training:

None	100%

Need for curriculum programs in this field:

Yes	67%
No	16 1/2%

No Answer	16 1/2%

Employment Opportunities in this Occupation:

Yes	83%
No	17%

Demand for Courses in this Occupation:

A great deal	22%
Average	22%
Little	66%

Would recommend the Profession of Veterinary Assistant to a relative or friend:

Yes	83%
No	17%

Know of Persons Needing the Services of this Type of Paraprofessional:

Yes (Government and Private Agencies	67%
No	23%

Know of Persons with Training as Veterinary Assistant who are presently unemployed:

No	100%

4. General Comments

No additional commnents	83%
Comments:	17%

One of the Veterinary Doctors commented that he feels that programs preparing for Veterinary Assistant should limit the number of persons trained to around 20 per year as there are only 15 private veterinary clinics in Puerto Rico.

C. Employees: (7)

1. General Information about the Employees Interviewed:

Type of firm for which working:

Private	86%
Public	14%

Employment Status:

Full-time	58%
Part-time	28%
No Answer	14%

Salary Range:

Less than $300	43%
$300 - $400	14 1/2%
$400 - $500	14 1/2%
No answer	28%

Duties and Responsibilities of the Work:

Cleaning	13%
Assistant in Surgery	45%
Organize & Sterilize Equipment	13%
Take urinary & saliva samples	13%
Take Care of the Animals	13%
Secretarial Work	3%

Working Conditions:

Good	86%
Excellent	14%

Fringe Benefits Received:

Tips	14%
None	86%

2. Preparation of Employees Interviewed:

Training on Occupation:

North American Correspondence Schools (California)	29%
High School	29%
Elementary School	29%
No Answer	13%

Status While Studying:

Full-time	43%
Work and Study	43%
No Answer	14%

Quality of Training Received:

Average	43%
Good	28 1/2%
No Answer	28 1/2%

Additional Training Received:

None	100%

Meet License or Certification Requirements:

None	100%

Consider there should be special curriculum programs for the training of veterinary assistant:

Yes	100%

After Receiving Training:

Application for jobs filed:

None	28.5%
1 to 2	43%
No Answer	28.5%

Time Unemployed After Graduation:

More than a year	29%
Started Studying after Employment	14%
No Answer	57%

Offers or Chances of Employment:

Yes	28.5%
No	28.5%
No Answer	43%

Agencies to which they Applied for Job:

Horse Track Administration	29%
No Answer	71%

Associations to which Employees Belong:

Yes (Vocational Industrial Clubs of America, Puerto Rico Chapter)	14%
No	43%
No Answer	43%

3. Opinion of the Employees about their Profession:

1/ As group surveyed for the most part did not receive special training in the occupation prior to the job experience, in most of these cases the questions that follow were not answered by them.

Future of or prospects in the occupation:

Very Good	58%
Limited	14%
No Answer	14%
Need for further training to stay on it	14%

Satisfied with the Profession Chosen:

Yes	58%
No Opinion	28%
No Answer	14%

Chances for Employment in this Field:

Yes	28.5%
No	43%
No Opinion	28.5%

D. Key Persons in the Field (11)

Open Interview Form (List is Appended)

1. Persons Interviewed:

Veterinary Doctor	82%
Administrators	18%

2. Agency Represented:

Public (Federal)	27%
Public (State)	46%
Private	27%

3. Main Ideas Expressed by the Group in Regard to the Veterinary Assistant Profession:

Doctors and Administrators:

The Federal Department of Agriculture has 17 veterinary doctors and 17 assistants distributed as follows:

Regions	Veterinaries	Asst. Veterinaries
Central Level	4	4
Arecibo	3	4
Caguas	3	2
Mayaguez	1	-
Ponce	2	3
San Juan	2	4
Veterinary Diagnostic Lab.	2	-
TOTAL	17	17

The minimum requirements for these assistants is elementary school and the basic pay fluctuates between $330 and $390 monthly.

A personnel director feels that there is not much mobility in this occupation and that few persons apply for this type of job.

Many veterinary doctors feel that there is a need for organizing curriculum programs for the preparation of Veterinary Assistants especially because of the fact that there is no veterinary school in Puerto Rico. On account of this, there are only 85 veterinary doctors in the Island all of whom obtained their degrees abroad. Assistant Veterinaries would be of great help to this professional group and could broaden their area of services. As there is no program in Puerto Rico for the preparation of Veterinary Assistants, the group employed can be assigned only limited responsibilities, as they have acquired their skills mainly on the job. Even the two assistants interviewed who pursued studies thru a correspondence course, feel this is not enough. From the point of view of the Veterinary, their education is also lacking in knowledge and skills for him to obtain the maximum help out of them. Many believe they should have some laboratory training.

The 85 Veterinary Doctors in Puerto Rico (see attached list) are working in the State Department of Agriculture, Department of Health, Experimental Station, Agricultural Extension Program, Animals Hospitals, Federal Department of Agriculture, El Comandante Race Track, and private offices. This group needs more than a hundred assistant veterinaries to perform their tasks. According to one veterinary doctor probably a few years from now more than 300 assistants will be needed to develop the program for eradication of poultry diseases.

The number of Veterinary Assistants working at present, according to the Director of the Federal Animal Disease Program, is over 100, 30 of whom are working for the Federal or State government, 30 at the International Airport, 15 as livestock inspectors, over 15 in veterinary clinics, 10 at the race track, and the rest in private veterinary offices.

There is no classified position for this occupation at this state level, probably because of the lack of trained personnel in this area.

Among the tasks mentioned for a veterinary assistant are the following:

Animal Delivery

First Aid

Tie and brand animals

Take temperature

Weight, clean and trim animals

Clerical duties such as receptionist, record keeping, filing and answer correspondence.

Livestock Inspector

It was mentioned that a veterinary school is a costly one because of the many physical facilities, equipment, animals, laboratories, etc., needed.

They believe in most cases that there is a need for a program of veterinary assistant and they are willing to cooperate in the organization of such program. Even though there is no veterinary school in Puerto Rico, many veterinaries feel that such a program could function on a cooperative basis using the facilities of the race track, animal clinics, Department of Agriculture, Experimental Station, etc.

Veterinary doctors are of the opinion that this is a rather new and emerging occupation and that with adequate training there will be job opportunities for this group. New opportunities could be available for this group as health inspectors at slaughter houses, laboratory diagnosis, animal clinics, livestock farms, race track and others.

One of the doctors interviewed mentioned that the former Chancellor of the Mayaguez Campus of the University of Puerto Rico made plans for organizing and assistant veterinary programs at Mayaguez. No information could be obtained about the present status of this project.

Association

The past President of the Association of Veterinary Doctors mentioned the fact that there is a need for more veterinary doctors and that at present at the State Experimental Agricultural Station there were about 12 vacancies in this area. This makes the services of Veterinary Assistants more necessary. He indicated the need of have in the Civil Service Register a position of veterinary assistant who will work always with a veterinary doctor. The number of veterinary assistants to be trained should be limited to around 20 per year. He mentioned the tasks that could be performed by an assistant which are more or less as stated previously, and the places where these assistants could work such as: race tracks, livestock farms, poultry farms, government agencies (federal and state), animal farms, and others.

The need for regulating the occupation was mentioned and the establishment of scales of salary and position steps according to the functions and experience in this paraprofession.

Examining Board, Veterinary Medicine

The President of the Veterinary Medicine Examining Board indicated the instability of the veterinary assistant profession due to the lack of training facilities for this group. Persons at present in the occupation do not have, therefore, the necessary training. In most cases what they have is only a genuine interest in the field of animal care. He favors the development of programs for the preparation of veterinary assistants and is sure that the Board will give all the help necessary for establishing certification requirements and for determining curriculum standards.

Conclussions and Recommendations

An analysis of the data collected for this survey revealed that there is definitely a need for establishing career programs (one and or two year offerings in the field of veterinary science technology. This conclussion is based mainly on the fact that there is no school at present in Puerto Rico offering such a program. At the same time, it is estimated that there is a need of an average for three veterinary assistants to one veterinarian in Puerto Rico, thus creating a job market of around 250 positions. The perspective, in this field are even broaden when trained personnel might be available in the market supply with new functions and tasks which they will be able to perform as a result of the special training received.

Nevertheless, caution should be taken as to the number of veterinary assistants to be trained each year on account of the limited number of veterinary doctors available. As new responsibilities may gradually be assigned to the veterinary assistant and the number of assistants per veterinary doctor could gradually be enlarged--because of delegation of tasks now performed by the veterinary doctor--a gradual increase in the number of persons trained in this field could be planned. Also as new federal aided programs for the prevention and eradication of certain animal diseases are put into effect, more veterinary assistants might be needed in the future.

The type of curriculum to be offered should be opened to the many already working in the paraprofession and to those entering in it. Therefore, upgrading courses (mini courses) could be offered on evenings and Saturdays according to the needs of special groups and regular one year and associate degree programs for those entering in the field.

The establishment of a veterinary assistant program was greatly welcomed by the professionals in the field and in most cases the persons interviewed are willing to cooperate in the preparation of curriculum, in offering courses and facilities, in supervising programs, establishing certification requirements, and to help create a civil service position for the program graduates.

Two of the main groups which should foster such a program, the Examining Board and the Professional Association, have expressed their position in favor of its establishment and their willingness to collaborate in everything possible.

The absence of a veterinary school makes somewhat difficult the establishment of such a program in Puerto Rico as there is a need for laboratories, animal farms, and other facilities for the development of the program. Nevertheless, this program is possible if the cooperative approach is used for its establishment. It was recommended, therefore, that a formal survey be made whereas cooperative institutions are sought and agreements made with veterinary doctors, government and private agencies for the acquisition on the job, thorugh supervised training, of those knowledges and skills that cannot be obtained in the university courses to be offered in the field of animal science.

As the field of veterinary science is such a complex one--covering laboratory, X-Ray, animal care, animal husbandry, animal diseases, nutrition, etc.--it is recommended that the cooperative program be organized in such a way that college offerings contain a core of courses basic to the animal science technology field and that the on-the-job training be of a specialized nature depending upon the interest of the student, his aptitudes, job opportunities, and training-on-the-job opportunities.

It can, therefore, be concluded that there is a need for the establishment in Puerto Rico of courses in the field of veterinary science technology for the preparation of persons interested in entering in this new paraprofession, veterinary assistant, and for the upgrading of those in the field which, in general, has sot the skills needed to perform all the duties required in the job.

APPENDIX 3

QUESTIONNAIRE

QUESTIONNAIRE

AGENCY OR ORGANIZATION :

____

____

Nature of the agency : PUBLIC ☐ PRIVATE ☐

FUNCTIONS :

____

____

____

____

1. Personnel related to the field in Veterinary Sciences who works in this agency or organization.

   a. Number of employees at professional level ☐

DISTRIBUTION OF PROFESSIONAL PERSONNEL

	QUANTITY	MONTHLY SALARY
A. Veterinary Doctors	____	________
B. Agronomist	____	________

b. Number of semi-professionals and / or technical employees

c. job classification

	Individual Monthly Salary	Part-Time	Full-Time
	____ ____	____ ____	____ ____

2. Population and / or area served by this agency or organization

a. a district ☐

b. one or more regions ☐

c. island wide ☐

3. Type of service offered by the agency.

a. consumers
b. indirect (information, education, etc.)

Nature and emphasis of service offered by the agency :

a. preventive (diagnosis) % ☐

b. education % ☐

c. directly to consumer , treatment, curative % ☐

4. Difficulties which faces the agency at present to fill vacancies

☐ a. lack of well qualified personnel at professional level

☐ b. need for a technical personnel able to assist the veterinary doctor.

☐ c. other - specify

☐ d. budget

5. Projected needs in terms of personnel, for the following five years

☐ a. professional personnel in veterinary medicine

☐ b. technologists to work under the supervision of a veterinary doctor.

☐ c. agronomists

☐ d. others

6. What are your projections in terms of technical and specialized personnel within the following ten years?

☐ a. number of veterinary doctors needed. Please make an estimate

☐ b. number of veterinary technologists needed.

7. Procedures followed by the agency to fill vacancies.

☐ a. - Classify personnel

☐ b - Non classify personnel

8. Average time the position is kept vacant

☐ a. veterinary doctor

☐ b. technicians (assistants to the veterinary)

Please, indicate, the knowledge and skills (competences) a veterinary technologist should have in order to fulfill the service needs of the agency.

☐ 1. ______________________________

☐ 2. ______________________________

☐ 3. ______________________________

☐ 4. ______________________________

☐ 5. ______________________________

☐ 6. ______________________________

Reccommendations and suggestions for the above mentioned program

☐ 1. ______________________________

☐ 2. ______________________________

☐ 3. ______________________________

Difficulties faced by the Agency in terms of personnel.

☐ a. Not enough qualified personnel

☐ b. Personnel as not available to work outside the metropolitan area.

☐ c. Personnel is not willing to live in the center of the island.

☐ d. Personnel do not have knowledge and skills requested by the job.

☐ e. Do not show a positive attitude toward the rendered service

☐ f. Do not keep up to date in terms of his professional knowledge

☐ g. Other, specify.

APPENDIX 4

STAMENT MADE BY THE
CHANCELLOR OF MEDICAL SERVICES
CAMPUS

UNIVERSITY OF PUERTO RICO
MEDICAL SCIENCES CAMPUS
COLLEGE OF HEALTH RELATED PROFESSIONS

APPENDIX

STATEMENT

Before the joint Committees for Agriculture and Natural Resources, Health, Welfare, and Environmental Quality, Justice, and Treasury.

To : Honorable Members of the Joint Committees

From : Jorge J. Fernández Pabón
Chancellor

Re : S. B. 55

Date : March 11, 1977

It is my pleasure to comment on S. B. 55 to regulate veterinary medicine practice in Puerto Rico.

As I understand and share the objectives pursued by this law, basically I am in favor of its approval. Nevertheless, I feel the presentation of a bill of this type provides an opportunity to meet the demand for better veterinary services more broadly by including articles establishing norms to regulate another aspect of veterinary science, that is, the training and practice of veterinary technology.

My comments below center on this aspect of the problem which concerns us in hopes of shaping a bill which we will be more willing to endorse.

The ammendments to S.B.55, I suggest here are in accordance with the interest expressed by the Legislature, the Senate in particular, and actions and decisions taken subsequently by the University of Puerto Rico as a result of that interest.

On April 3, 1974, the Senate passed S.R. 364 requesting the University of Puerto Rico to study the feasibility of offering a course leading to an associate degree in veterinary sciences. It is with great satisfaction that I am able to inform you that starting with the next academic year, a Bachelor's program in Veterinary Technology will be initiated by the recently established College of Health Related Professions on this Campus. Graduates of this Program, working together with licensed veterinary doctors, will enable the latter to work more efficiently both in quantitative and qualitative terms. This Will be because these technologists will acquire skills through their Bacallaureate level studies which will allow veterinary doctors to delegate to them some functions which at present, due to extraneous considerations, are only carried out by veterinary doctors. These functions may be delegated with minimum supervision, something that is not possible when thy are assigned to less skilled non-professional personnel such as veterinary technicians and aides.

Naturally, the functions to which I refer will in no case include functions which can only appropriately be carried out by licencesed veterinary doctors.

In view of the above, I recommend that S.B. 55 be ammended to provide the legal structure needed to allow veterinary technologists to do the job for which they are trained, and to regulate various matters related to the practice of this profession.

Page 1, Title of the Law - This should read, "To regulate the practice of Veterinary Medicine and Veterinary Technology in Puerto Rico".

Statement of Purpose - Add to the first sentence, "and of veterinary technology". substitute in the second sentence, "these professions" instead of "veterinary medicine".

Page 3, Line 2 - Add at the end of Article 2(c)(3)

the following:"Veterinary Technology is a body of technical knowledge and skills needed to prevent and treat animal disease. It also concerns veterinary science in general and the various branches or specialization in veterinary medicine, except functions or activities such as diagnosis, prescription, surgery, prognosis and so forth, which are the exclusive domain of the veterinary doctor, in accordance with generally accepted standards in Veterinary Science

Veterinary Technology Practice means:

1. To carry out animal disease prevention and treatment functions such as those referred to above as assigned and supervised by a veterinary doctor.
2. To be able and willing to carry out the aforementioned activities directly or indirectly, in public or private.
3. To induce confidence in one's qualifications to carry out the aforementioned activities by appropriately using titles, terms, abbreviations or acronyms.

Line 8 Add at the end of Article 2(e) the following -

"A Veterinary Technologist is a citizen with a Bachelor's Degree in Veterinary Sciences or its equivalent, awarded by a school or university accredited by the competent authorities of the Commonwealth of Puerto Rico."

"A Veterinary Technician is citizen formally trained in the discipline of Veterinary Sciences who does not have a Bachelor's Degree in Veterinary Sciences or its equivalent from a school or university duly recognized in Puerto Rico."

Page 6, Line 2 - Add to Article 3 the followings:

"e. The Council on Higher Education, with the advice of the Special Commission referred to in sub article (b) of this Article, will determine which veterinary science programs to accredit for purposes of allowing graduates to practice their profession in the Commonwealth of Puerto Rico."

Line 10 - Insert: "or from an accredited veterinary technology prgram" after the word "veterinary".

Page 7, Line 17 - Subarticle (i) should read as follows".

"i. that a veterinary aide or veterinary technician carry out his/her functions and taks under the direct and immediate supervision of a licensed veterinary doctor, according to the norms and regulations established by the Board for these purposes".

Line 20 Add the following subarticle:

"j. that a veterinary technologist practice his profession according to the dispositions of this law".

Page 11, Line 26 - Insert the following:

"To regulate the practice of the Veterinary Technology profession and delimit the functions appropriate to the Veterinary Technologist, as well as the veterinary aide and veterinary technician. The Board also will study the feasibility of establishing a system of examinations and licenses for the Veterinary Technology profession and will make the pertinent recommendations to the Legislature."

Page 23, Line 5 - Subarticle (a) of Article
16

Line 18 - Insert "or veterinary technology"
after the word "veterinary".

I am available and willing to provide you with any additional information you might find necessary and to appear before the pertinent Committees to explain in detail the scope of the ammendments suggested above.

APPENDIX 5

EVALUATION MODEL FOR THE VETERINARY TECHNOLOGY PROGRAM

C I P O

EVALUATION MODEL FOR THE VETERINARY TECHNOLOGY PROGRAM

(From the development of the proposal to the implementation program)

CONTENT (Objectives)	INPUT (Resources)	PROCESS (Program)	OUTCOME (Productivity)
These are the general goals and specific objectives established for the program on the basis of the determined needs.	These are the ingredients of the project that make it work, such as money, time, facilities, materials, equipment, personnel, and other natural resources.	This is the operational plan or procedure that is used, utilizing the resources (input). It describes the primary activities of the project.	This constitutes the product of the project established in terms of the effectiveness of personnel growth behavioral changes, and success in the specific roles designed for students.

UNIVERSITY OF PUERTO RICO
Medical Sciences Campus
College of Health Related Professions

FORMAT, CONTENT, AND SCORING PROCEDURE OF:

EVALUATION PLAN FOR THE PROPOSED VETERINARY TECHNOLOGY PROGRAM

(Based on a systems, formative-summative approach to evaluation)*

I. OBJECTIVES OF THE PROGRAM EVALUATION PROPOSED AS PRESENTED ON PAGE 23 OF THE PROPOSAL.

1. To provide information to improve the educational program while in progress.
2. To determine the effectiveness of the teaching learning transaction.
3. To determine at different stages during the implementation phase the degrees to which the program responds to the work plan.
4. To determine the effectiveness of the program in developing the desired competencies in the students.
5. To determine the training time necessary to develop the desired competencies in the students.

---

*This evaluation plan or design applies to most educational programs in general. For specific methods for the proposed Veterinary Technology Program, see evaluation design for each course after the description and outline.

II. BASIC AREAS OF THE EVALUATION PLAN

A. Planning and Design

A-1 Origination of the idea

Sources of ideas for initiating the innovative project are identified and assessed for feasibility and potential educational advantages.

A-2 Pre-Planning

Acceptable ideas are reviewed by knowledgeable persons in order to develop them into an educationally sound proposal.

A-3 Identification of Needs

The needs of the people to be served are identified in order to plan for projects involving behavioral changes at the three levels: cognitive, affective, and psychomotor.

A-4 Philosopy

Presentation of a philosophy of the proposal which reflects the recognized needs and the educational philosophy of the institution and of the country.

A-5 Community Involvement

The initial and continual planning of the proposal is based on the broadest possible cross-section of community representation.

A-6 Outside Involvement

Pertinent and up-to-date knowledge available from sources outside the community is considered in planning of the proposal.

A-7 Resource Identification

All currently available and anticipated resources are identified and classified in order to determine the limitations, capabilities, and potential of the programs.

A-8 Design Production

The general plan for meeting the philosophy of the proposal is designed by blending together all of the previously gathered information and material.

A-9 Financing

A preliminary budget is prepared which shows all anticipated expenditures and identifies potential sources of funds.

A-10 Priorities

The implementation of an effective proposal and the efficient use of finances require that priorities be determined and assigned in the planning stages of the proposal.

B. Content

B-1 Goals and Objectives

The project establishes goals and objectives which are consistent with the broad philosophy and objectives of the institutions and should be stated in measurable terms.

B-2 Curriculum

Realistic goals and specific objectives are developed to complement or supplement those of the educational institutions.

B-3 Faculty and Staff Activities

The faculty and staff roles for performing their curriculum tasks are clearly defined.

B-4 Students Involvement

A plan for student involvement in the planning and the execution of the project is established.

B-5 In-Service Preparation

A program of in-service preparation for project faculty and staff is developed and established, providing for acquisition of new understandings, perceptions, skills, and techniques required in the project.

B-6 Resource Utilization

Resources for carrying out the project should be continually inventories and their utilization evaluated on a continuing pattern.

B-7 Material and Equipment Utilization

Materials and equipment needed for carrying out the project should be continually inventoried and their utilization evaluated on a continuing pattern.

C. Input

C-1 Organizational Pattern

An organizational pattern with clear-cut lines of responsibilities is established as an essential to an efficiently operating project.

C-2 Personnnel

All personnel involved in the project should be assigned clearly defined responsibilities should be appointed on the basis of individual capabilities for fulfilling specific staff positions, and should be thoroughly familiar with individual responsibilities and their relationships to the overall project.

C-3 Facilities

Sufficient, adequate, and appropriate facilities for the proper and efficient operation of the program are provided and maintained in such a manner as to be available and useable at all times while the project is in operation.

C-4 Materials and Equipment

Appropriate materials and equipment for the proper and efficient operation of the project are provided and maintained in usable condition.

C-5 Budget

A clearly defined budget is prepared, utilizing acceptable accounting which takes into consideration all areas of income and expenditure, and is managed in accord with all rules and regulations of the institution.

C-6 Student Participation

Student participation is set with specific duties and responsibilities assigned for each student, where program learning content dictates such participation.

C-7 Scheduling

Maximum effective utilization of facilities is obtained through an efficient method of scheduling staff and students for such facilities and equipment.

C-8 Dissemination

Pertinent data and information compiled as a result of the project are properly catalogued, interpreted in a meaningful manner, and distributed to interested and concerned parties.

C-9 Records Maintenance

An efficient system for maintaining records is devised in order to insure a clear and complete record of all activities and functions, and provide continuity despite possible staff change.

D. Outcome

D-1 Fiscal Policies

The effectiveness of fiscal policies is continously evaluated with subsequent adjustment of policy to meet the fiscal needs of the program as they are influenced by changes in the financial structure, in sources and in the availability of funds.

D-2 Personnel Evaluation

Productivity in terms of personnel growth, behavioral changes and success in their respective roles is continuosly observed.

D-3 Personnel Growths and Attitudes

Project personnel demonstrates:

1. an acceptability to a change in attitudes

2. effectiveness in the utilization of an increased number of teaching skills

3. awareness of the roles they play in an education program.

D-4 Student Changes in Attitudes

Students show evidence of change and growth in attitudes through modifications in observable behavior.

D-5 STUDENT CHANGES IN KNOWLEDGES ACTIVITIES AND EXPERIENCES TO INCREASE KNOWLEDGE RELATED TO VETERINARY TECHNOLOGY ARE PROVIDED BY THE PROJECT

D-6 Project Effectiveness

Short-and-long-term effects of the proposed program of studies upon the local educational institution and community are assessed in order to determine the program effectiveness.

III. Scoring Procedure

The scoring procedure is based on a 0-10 scale. Persons responsible for the program should consider the specific area of the evaluation plan, and after answering the questions in the area, should determine the extent to which the project is meeting the area.

A score of 0-3 indicates that the specific area is not being met, or being met to an insignificant degree.

A score of 4-6 indicates that the specific area is being satisfied approximately half of the instances.

A score of 7-10 indicates that the specific area is being achieved or is being satisfied most of the time.

UNIVERSITY OF PUERTO RICO
MEDICAL SCIENCES CAMPUS
COLLEGE OF HEALTH RELATED PROFESSIONS

PROJECT
VETERINARY TECHNOLOGY PROGRAM

EVALUATION FORM FOR THE VETERINARY TECHNOLOGY PROGRAM

Categories for Evaluation in the
Veterinary Technology Program:

RATING SCORE

I. Planning and Design

1. Origination of the idea ____
2. Pre-planning ____
3. Identification of needs ____
4. Philosophy ____
5. Community Involvement ____
6. Outside involvement ____
7. Resource identification ____
8. Design production ____
9. Financing ____
10. Priorities ____

Total Score ____

Average $\frac{TS}{10}$ = ____ ☐

RATING SCORE

[illegible]. Content

1. Goals and objectives ____
2. Curriculum ____
3. Faculty and staff activities ____
4. Student involvement ____
5. In-Service preparation ____
6. Resource utilization ____
7. Material and equipment utilization ____

Total Score ____

Average $\frac{TS}{7}$ = ____

____

RATING SCORE

C. Operation

1. Organizational pattern ____
2. Personnel ____
3. Facilities ____
4. Materials and equipment ____
5. Budget ____
6. Student participation ____
7. Scheduling ____
8. Dissemination ____
9. Record maintenance ____

TOTAL SCORE ____

AVERAGE $\frac{TS}{9}$ = ☐

D. Productivity

1. Fiscal policies ____
2. Personnel evaluation ____
3. Personnel growths and attitudes ____
4. Student changes in attitudes ____
5. Student changes in knowledges ____
6. Project effectiveness ____

TOTAL SCORE ____

AVERAGE $\frac{TS}{6}$ = ☐

EVALUATION SUMMARY

Major Area	Total Score
A. Planning and Design	
B. Content	
C. Input	
D. Productivity	
Total Score (in all areas)	
Average Score for the whole project $\frac{TS}{32}$	

* Scoring procedure

The scoring procedure is based on a 0-10 scale. Persons responsible for the program should consider the specific area of the evaluation plan and should determine the extent to which the program is meeting or has met the area.

A score of 0-3 indicates that the specific area is not being or has not been met, or is being or has been met to an insignificant degree.

A score of 4-6 indicates that the specific area is being or has been satisfied approximately half of the time, or in about half of the instances.

A score of 7-10 indicates that the specific area is being or has been achieved most of the time.

APPENDIX 6

AGREEMENTS

UNITED STATES DEPARTMENT OF AGRICULTURE
ANIMAL AND PLANT HEALTH INSPECTION SERVICE
VETERINARY SERVICES
P.O. Box 29127
65th Infantry Station
Río Piedras, Puerto Rico 00929

August 26, 1977

Dr. José R. González, Dean
College of Health Related Professions
Medical Sciences Campus
University of Puerto Rico
Río Piedras, Puerto Rico

Dear Dr. González:

We wish to inform that our organization, U.S.D.A., Animal and Plant Health Inspection Service, specifically Veterinary Services in Puerto Rico will cooperate with your Veterinary Technology Education Program in providing clinical (field) experience to your students. This will be a type of on the job training by riding with our employees -- Veterinary Medical Officers and Animal Health Technicians.

In their interelationship the students will be exposed to the various active disease eradication programs now in progress, such as: bovine tuberculosis, brucellosis, hog cholera, the Tropical Bont Tick. Other activities will include experiences with surveillance procedures for animal diseases and parasites; among them: ticks, screwworms, exotic diseases. These surveillances are conducted on continuous basis at field level as well as at ports of import, both air and ocean ports.

Field activities will involve on site testing procedures: application and observation of tuberculin test in cattle; post-mortems in the field and collection of tuberculosis and tuberculous-like specimens for laboratory examination; proper disposition of carcasses; supervising cleaning and disinfection procedures; making appraisals, branding and preparing documents for indemnity payments; case history taking with tracebacks and intensive epidemiology; attend technical and/or orientation meetings with farmers, County Agents, public in general; issuance of permits for the controlled movement of animals under quarantine.

In brucellosis, the student will be involved, among others, in collection of blood and milk specimens at the farms for laboratory examination; certain on site field test procedures; animal vaccinations; collection and preservation of farm milk samples (tank) and of blood samples at slaughterhouses for disease surveillance; appraisals, branding and indemnity procedures; cleaning and disinfection; quarantine imposition and releases; traceback and other epidemiological related activities; issuance of permits for the controlled movement of animals under quarantine; various contacts, meetings and other information dissemination procedures at various levels.

Hog Cholera surveillance will include: field diagnostic procedures involving leukopenia determination (counts done at the farm); post-mortem and tissue collection techniques; tonsil biopsies; animal bleeding; case history taking, tracebacks and intensive epidemiological work; quarantine issuance and releases; cleaning and disinfection procedures; euthanasia techniques; animal disposition procedures in case of outbreaks and depopulations; appraisals and indemnity claims preparation.

A Bont tick (*Amblyomma variegatum*) eradication program scheduled to commence in a few months in Puerto Rico will provide a most interesting area for training. We feel this will be an exciting experience and a big challenge and certainly hope many of your students will benefit from an intensive participation and interelationship.

There are many other areas that will amplify training opportunities. It will be too extensive in trying to define these in details. However, they will be entirely available to your students.

To conform to our administrative procedures, your students will be considered as collaborators without compensation. Each student will be accepted by completing an AD Form 347 (copy attached) for a 6 months maximum assignment.

We hope you find these arrangements acceptable to your needs and purposes. We will be glad to share our activities and experiences with a group of young people engaged in an organized and well oriented training effort of this nature. Both entities I am sure will benefit, but the most comforting feeling arises from the simple fact that our work force will be supplied with a cadre of young people well trained and motivated to protect our Nation's animal food resources. Food production is the most vital of all industries to man's well being and peace. We praise all those who care.

Sincerely,

Carlos H. Miranda
District Veterinarian in Charge
PR & USVI

Enclosure

AGREEMENT BETWEEN THE CLINICA VETERINARIA VISTAMAR
AND THE VETERINARY TECHNOLOGY PROGRAM, MEDICAL SCIENCES CAMPUS,
UNIVERSITY OF PUERTO RICO, SAN JUAN, PUERTO RICO

It is agreed that the College of Health Related Professions of the University of Puerto Rico will make use of the clinical facilities of CLINICA VETERINARIA VISTAMAR for clinical experience of Veterinary Tecnology students enrolled in the Veterinary Technology education program. It is understood that the College of Health Related Professions and the CLINICA VETERINARIA VISTAMAR jointly, will develop policies for the initiation of the program before the beginning of each academic year.

Under this arrangement, it is understood that such teaching program will not interfere with the agency or institution's primary mission in the care and treatment of animals. It is further understood that the College of Health Related Professions recognizes and accepts all responsibility for the planning, scheduling, and conduct of this teaching program.

It is understood that the College of Health Related Professions will not discriminate against any employee or applicant for employment or registration in its courses of study because of race, color, creed, or national origin.

Either party, for sufficient reason, shall have the right to discontinue or terminate the affiliation at the end of any academic year by giving ninety days notice.

ACCEPTED AND AGREED TO BY:

Acting Chancellor
CHANCELLOR, MEDICAL SCIENCES
CAMPUS, UNIVERSITY OF PUERTO RICO

DIRECTOR Carlos J. Cardona Jr.
Box 1346 La Ceramica Annex
Carolina, P.R. 00630

DEAN, COLLEGE OF HEALTH RELATED
PROFESSIONS, MEDICAL SCIENCES
CAMPUS, UNIVERSITY OF PUERTO RICO

September 7, 1977
DATE

AGREEMENT BETWEEN THE CUPEY VETERINARY CLINIC
AND THE VETERINARY TECHNOLOGY PROGRAM, MEDICAL SCIENCES CAMPUS,
UNIVERSITY OF PUERTO RICO, SAN JUAN, PUERTO RICO

It is agreed that the College of Health Related Professions of the University of Puerto Rico will make use of the clinical facilities of CUPEY VETERINARY CLINIC for clinical experience of Veterinary Tecnology students enrolled in the Veterinary Technology education program. It is understood that the College of Health Related Professions and the CUPEY VETERINARY CLINIC, jointly, will develop policies for the initiation of the program before the beginning of each academic year.

Under this arrangement, it is understood that such teaching program will not interfere with the agency or institution's primary mission in the care and treatment of animals. It is further understood that the College of Health Related Professions recognizes and accepts all responsibility for the planning, scheduling, and conduct of this teaching program.

It is understood that the College of Health Related Professions will not discriminate against any employee or applicant for employment or registration in its courses of study because of race, color, creed, or national origin.
Either party, for sufficient reason, shall have the right to discontinue or terminate the affiliation at the end of any academic year by giving ninety days notice.

ACCEPTED AND AGREED TO BY:

Acting Chancellor
CHANCELLOR, MEDICAL SCIENCES
CAMPUS, UNIVERSITY OF PUERTO RICO

CUPEY VETERINARY CLINIC
DIRECTOR, Walter E. Colón, D.V.M.
356 San Claudio, Sagrado Corazón,
Rio Piedras, P.R. 00926

DEAN, COLLEGE OF HEALTH RELATED
PROFESSIONS, MEDICAL SCIENCES
CAMPUS, UNIVERSITY OF PUERTO RICO

September 29, 1977.
DATE

AGREEMENT BETWEEN THE DEPARTMENT OF AGRICULTURE AND THE VETERINARY TECHNOLOGY PROGRAM, MEDICAL SCIENCES CAMPUS, UNIVERSITY OF PUERTO RICO, SAN JUAN, PUERTO RICO

It is agreed that the College of Health Related Professions of the University of Puerto Rico will make use of the clinical facilities of Diagnostic Laboratories, field inspection for Tuberculosis and Brucelosis in Livestock for clinical experience of Veterinary Technology students enrolled in the Veterinary Technology education program. It is understood that the College of Health Related Professions and the Department of Agriculture jointly, will develop policies for the initiation of the program before the beginning of each academic year.

Under this arrangement, it is understood that such teaching program will not interfere with the agency or institution's primary mission in the care and treatment of animals. It is further understood that the College of Health Related Professions recognizes and accepts all responsibility for the planning, scheduling, and conduct of this teaching program.

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ACCEPTED AND AGREED TO BY:

CHANCELLOR, MEDICAL SCIENCES
CAMPUS, UNIVERSITY OF PUERTO RICO

SECRETARY OF AGRICULTURE
PUERTO RICO DEPARTMENT OF
AGRICULTURE

DEAN, COLLEGE OF HEALTH RELATED
PROFESSIONS, MEDICAL SCIENCES
CAMPUS, UNIVERSITY OF PUERTO RICO

August 26, 1977.
DATE

AGREEMENT BETWEEN THE CUPEY VETERINARY CLINIC
AND THE VETERINARY TECHNOLOGY PROGRAM, MEDICAL SCIENCES CAMPUS,
UNIVERSITY OF PUERTO RICO, SAN JUAN, PUERTO RICO

It is agreed that the College of Health Related Professions of the University of Puerto Rico will make use of the clinical facilities of CUPEY VETERINARY CLINIC for clinical experience of Veterinary Tecnology students enrolled in the Veterinary Technology education program. It is understood that the College of Health Related Professions and the CUPEY VETERINARY CLINIC, jointly, will develop policies for the initiation of the program before the beginning of each academic year.

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ACCEPTED AND AGREED TO BY:

Acting Chancellor
CHANCELLOR, MEDICAL SCIENCES
CAMPUS, UNIVERSITY OF PUERTO RICO

DEAN, COLLEGE OF HEALTH RELATED
PROFESSIONS, MEDICAL SCIENCES
CAMPUS, UNIVERSITY OF PUERTO RICO

CUPEY VETERINARY CLINIC
DIRECTOR, X Walter E. Colón, D.V.M.
356 San Claudio, Sagrado Corazón,
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September 29, 1977.
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